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<p>13. ABSTRACT (Maximum 200)</p> <p>Phase I of this two phase study focuses on longitudinal descriptive analyses of natality and pregnancy outcomes among Active Duty Air Force (ADAF) women from 1975 to 1994. Observed rates for normal reproductive outcomes and adverse pregnancy outcomes are being compared for the first time, across different demographic strata within the US Air Force. The primary source of data is the Air Force Medical Support Agency (AFMSA) Standard Inpatient Record and the Armstrong Laboratory Human Resources Directorate historical files.</p> <p>This annual report examines the natality experience (1975-1994). Age-specific rates for outcomes varied within the AF by calendar year, age, race, rank, command, geographic area, and occupation, with consideration of differences in marital status and parity. Comparisons between the Air Force experience and that of employed women in the USA show that the number of births/1,000 women appear slightly greater than that of the civilian population, indicating that active duty does not reduce the birthrate.</p> <p>As reviewed in the Appendix, the information developed in Phase I, is background for Phase II case-control studies which evaluate causal hypotheses regarding the possible effects of AF service among enlisted women and officers, on risks of preterm delivery, pregnancy induced hypertension, and spontaneous abortion.</p>				
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FOREWORD

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Oct 1, 97
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**An Investigation of Reproductive Health Outcomes
and
Potential Risk Factors in Air Force Women**

Phase 1: Technical Report 1

Natality Experience of Air Force Women, 1975-1994

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Co- Directors of Longitudinal Studies

December, 1997

Acknowledgment

The conceptual basis for this project came from initial protocols developed by Captain Joy Miller and Major Kevin Grayson of the Armstrong Laboratory, Brooks AFB, Texas. It also would have been impossible to implement the study without John Mellman's detailed knowledge of Air Force Medical Service inpatient databases, their historical development, and their organization and structure.

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A. Introduction

Phase I of this two phase study focuses on longitudinal descriptive analyses of natality and pregnancy outcomes among Active Duty Air Force (ADAF) women from 1975 to 1994. Observed rates for normal reproductive outcomes and rates of adverse pregnancy outcomes will be compared for the first time, across different demographic strata within the US Air Force. The distributions of such rates will indicate where interventions in prevention are needed and where improvements in health care planning could reduce adverse rates. The results will also provide a framework within which to interpret the reproductive consequences of future deployments. The last 5 years of data will be used to model outcomes and project future natality and adverse pregnancy outcomes by command. The primary source of data are the Air Force Medical Support Agency (AFMSA) Standard Inpatient Record and the Armstrong Laboratory Human Resources Directorate historical files.

The Phase I technical objectives will:

1. Describe the natality and adverse reproductive outcome experience of ADAF women over 20 years from 1975 to 1994.
2. Describe differences in natality and adverse reproductive outcome rates for ADAF women by age, race, rank, occupation, marital status, pay-grade, and command.
3. Use 1990-1994 data to model future rates of natality and adverse reproductive outcomes for US Air Force Commands.

The descriptive information developed in Phase I, will be used as a background for Phase II analytic epidemiologic studies which evaluate causal hypotheses regarding the possible effects of Air Force service, among ADAF enlisted women and officers, on risks of pre-term delivery, pregnancy induced hypertension, and spontaneous abortion. A case-control study among a cohort of ADAF women from 1990 to 1996 will examine potential associations between lifestyle and occupational risk factors and the three adverse pregnancy outcomes. The Phase II study hypothesis is that occupational exposures in the Air Force are associated with adverse pregnancy outcomes among ADAF women and technical objectives cover these research questions:

1. Are there associations between employment pertaining to AF occupations and pre-term delivery, spontaneous abortion, or pregnancy induced hypertension?
2. Are there associations between chemical or physical exposures in AF occupations and pre-term delivery, spontaneous abortions, or pregnancy induced hypertension?
3. Do the resultant odds ratios differ by age, race, smoking, alcohol consumption, rank, duration of service, occupation, and pay-grade

A draft of the 20 year natality experience of women in the Air Force is presented in this annual report, but a final draft document will be provided separately. Thus the Body, Conclusion, and References of the annual report pertain to the draft Report I.

Report II (to be completed later this year) will present separate findings of the 20 year adverse outcome experience of women in the Air Force. Case definitions for adverse outcomes have been tested across time periods and are complete and the data analysis is being conducted now.

With respect to Phase II studies, preparatory tasks on the three Phase II case-control studies have been completed including case-definition and selection of sets of cases and controls for each outcome (See Appendix). We are currently generating the CATI questionnaire for medical extraction and the industrial hygiene assessments appropriate for data collection.

B. Objectives

This study: 1) describes the natality experience of active duty Air Force (ADAF) women over a 20 year period, 1975 through 1994; 2) describes differences in natality rates for ADAF women by age, race, rank, occupation, marital status, major command and geographical region; and 3) projects the potential impact of natality rates for the changing demographic structure of the Air Force. Data for the project are based on the Air Force Medical Support Agency (AFMSA) Standard Inpatient Data Record and the Armstrong Laboratory Human Resources Directorate historical files. The report is the first in a series of studies entitled "An Investigation of Reproductive Health Outcomes and Potential Risk Factors in Air Force Women," supported by the Defense Women's Health Research Program.

Natality among Active Duty Air Force (ADAF) women is particularly relevant to the Air Force as the leader among the military services in providing equal opportunity for women to enter all career fields not restricted by congressional legislation. Since 1975, Air Force policy has been to allow pregnant women to remain on active duty and to continue in the work force after the birth of their child. As a result, obstetrical conditions have become the single largest cause of hospitalization for Air Force women (69 percent), exceeding the total hospitalization rates for males. The repeal of the Combat Exclusion Act of 1993 gave women in the military access to all occupational (including combat) categories. However, even prior to the 1993 decision, 99.7 % of the jobs in the Air Force were open to women (Poindexter, 1994). As of

September, 1996, 17% of Air Force personnel are women with these 64,176 airmen accounting for 15.8 % of the officers and 16.9% of the enlisted force (USAF Almanac, 1997).

This report provides the descriptive framework to better understand the relationship between fully employed work status (active duty) and patterns of natality; and to estimate future health needs for the female ADAF population. Historical descriptions of active duty Air Force (ADAF) reproductive rates are essential to plan for the future. The historical profile provides a framework within which to interpret the reproductive consequences of an increasing operations tempo including multiple deployments and separation from family. Variability in natality rates across different demographic strata provide direction for targeted programs for occupational exposure protection, provision of health services, and personal implementation of lifestyle changes to protect the health of the mother and child. The baselines developed also provide the required background of descriptive information for three analytic case-control studies that will evaluate hypotheses identified in the literature regarding the possible adverse occurrence of pre-term delivery, pregnancy induced hypertension, and spontaneous abortion among active duty Air Force women. Maternal occupation has been reported to have adverse effects on pregnancy outcomes for several types of occupations (Rothberg 1984; Hoiberg and White 1992; Thomas and Edwards 1989) and some investigators have described military pregnancies as "high risk" (Kruger 1979; Birdsong 1987; Ramirez et al 1990; Magann and Nolan 1991). This is the first population based study to determine overall natality rates; therefore, results from this study will be useful to the Air Force for future investigations where pre-established rates of natality and adverse birth outcomes have not been readily available

(e.g. as a standard against which the rate of spontaneous abortion among women deployed to a given operation, or employed in a particular occupational field, might be compared).

C. Background and Significance

Not only are women a significant part of the Air Force workforce, female Air Force officers and enlisted personnel are a unique sub-population of American working women. Their organizational setting provides a unique opportunity to examine factors influencing natality rates and adverse pregnancy outcomes over time. Unlike most civilian studies, ADAF women's natality statistics will afford insights into the role of multiple maternal demographics, such as age at childbirth, race/ethnicity, marital status, income, and occupation, while eliminating the confounding influence of lack of access to health care and unemployment (Fox et al, 1977, Kruger, 1979, Buttemiller, 1984, Birdsong, 1987, Ramirez et al, 1990, Kugler et al, 1990, Magann & Nolan, 1991, Adams et al, 1993, Irwin et al, 1994, Alexander et al, 1993). Difficulty in assessing these factors complicates the interpretation of many studies conducted in the civilian setting. The passage of Public Law 90-130 in 1967 encouraged more women to join the Air Force, and women have continued to become increasingly integrated into nontraditional and operational roles.

The structure and availability of Air Force data are relatively consistent across time providing more accurate analyses of demographic and work-related factors. On a practical level, 20-year baseline rates over a range of pregnancy outcomes provides an internal standard against which, for example, the rate of spontaneous abortions among women engaged in specific occupations or military operations can be compared. The tabulation of this information not only increases our understanding of the demographics of reproduction among ADAF women,

but also provides needed background information to help target health promotion programs, health services planning, and ultimately, to contribute to force readiness.

Civilian natality rates vary significantly with age and race (NCHS, 1993a). Marital status also affects fertility as rates are higher among unmarried minority women (NCHS, 1993b). But it has been demonstrated that much of the reported changes are associated with single, nonwhite status and are related to financial barriers to care (Berkowitz, 1981). Natality rates also decline with employment. Almost a threefold difference in rates was observed for employed women of the same age (NCHS, 1993a). The recent deployment of troops in "Desert Shield" and "Desert Storm" reemphasizes the importance of documenting historical trends of natality as well as the frequency of adverse pregnancy experiences over time among ADAF women (US Senate, 1994). Studies have examined the relationship between adverse pregnancy outcomes and race and active duty status, but none have examined changes in rates over a 20-year interval of time. An Army study (Ramirez et al, 1990) showed that women employed in physically demanding jobs have increased odds of pre-term delivery, up to 75 percent greater than women employed in jobs with low physical demand. When compared to military dependent wives, active duty women have been shown to be at increased risk for ectopic pregnancy (Birdsong, 1987), pregnancy induced hypertension (Magann & Nolan, 1991), and pregnancy toxemia, anemia, and pre-term labor (Fox et al, 1977). Another Air Force study (Kruger, 1979) reported that pre-eclampsia, perinatal mortality, and low birth weight infants were more frequent among active duty women, but the increase was not statistically different from the frequency among dependent military wives of similar age who use the same medical

care system. Therefore, military jobs were considered a potential risk factor for adverse reproductive outcomes. In contrast, two other studies have demonstrated that active duty women have fewer pre-term births (Buttemiler, 1984) and lower neonatal death rates (Kugler et al, 1990) when compared to military dependents of comparable age, marital status, and socioeconomic status (SES). Based on previous studies, it is unclear whether ADAF women are at greater risk for an adverse pregnancy outcome.

The lack of agreement between studies may be partially explained by differences in study design and failure to control for confounding factors. A study designed to include all pregnancy outcomes from all Air Force installations eliminates the potential for selection bias present in previous studies that only selected records from military referral hospitals (for example Fox et al, 1977, Kruger, 1979, Birdsong, 1987, Kugler et al, 1990). Methodological differences in many civilian studies contribute to contradictory reports on the effects of maternal job-related activity and occupational exposures on pregnancy outcomes.

Occupational stress (Brandt & Neilsen, 1992, Homer et al, 1990), increased physical exertion and prolonged standing (Ramirez et al, 1990, Florack et al, 1993, Saurel-Cubizolles et al, 1985, Mamelie et al, 1984, Eskenazi et al, 1994, Teitelman et al, 1990), and exposures to toxicants (Lindbohm et al, 1990, Zhang et al, 1992, Taylor et al, 1984), have been associated with adverse pregnancy outcomes. However, these associations were often based on comparisons between employed and unemployed women where the choice of a suitable control group is difficult, and often results in an observed "healthy worker effect" (Bogue, 1987, Murphy et al, 1984, Stengel et al, 1987a, Stengel et al, 1987b). Employed women have

higher SES and income, and better health care coverage than unemployed women (Kugler et al, 1990).

Air Force women are unique among women in the military. Air Force occupations and work-related exposures are particularly broad among women, as historically 96 percent of Air Force occupations have been open to women versus 20 percent in the Marine Corps, 50 percent in the Navy, and 55 percent in the Army (Office of the Assistant Secretary of Defense, 1988). Air Force women also represent a uniquely stable population within the military services with the highest first-term reenlistment rate of over 50 percent and highest career continuation rates among all military services of over 90 percent. The range of jobs and stability of employment among ADAF women provide a particularly suitable population within which to evaluate potential causal associations between both occupational and operational factors and adverse reproductive events.

This report provides a descriptive analysis extending over a twenty-year period of longitudinal natality trends among Air Force active duty women from 1975-1994. Age-specific natality rates are demographically compared within the AF by calendar year, race, rank, marital status, occupation, major Air Force command function, and geographic region where the mother was stationed. The largest proportion of total hospitalizations for ADAF women are due to pregnancy-related admissions, exceeding the hospitalization rates for males. Therefore, these descriptions of ADAF natality rates provide historical trends to more effectively target allocation of funds for prevention programs and health services planning. The Air Force is

implementing managed health care centers. Given, that obstetrical services and associated adverse outcomes are expensive, the Air Force will need to model future needs based on the demographic characteristics of ADAF women. Lastly, the proposed results fill a gap in our interpretation of the reproductive consequences of deployment. Although the internal longitudinal natality trends associated with the changing demographic profiles of the Air Force are critical for internal planning, this study also provides some, albeit limited, comparisons between US Vital Statistics and US Air Force natality statistics. These comparisons provide the opportunity to evaluate the association between race, income, and marital status in a fully employed and fully insured group of women over their reproductive years.

Methods

A. Sources of Data

Reproductive histories were compiled based on inpatient hospital record abstracts maintained in the Air Force Medical Support Agency (AFMSA) Standard Inpatient Data Record (SIDR). The ADAF natality records selected from the SIDR included an initial broad range of International Classification of Diseases (ICD) codes consistent with reproduction and delivery of an infant (630-676). The study interval (1975-1994) includes three ICD versions (ICD-8, ICD-9, and ICD-9 CM). Patient identification, ICD codes, and demographic variables are all recorded in the same SIDR medical record abstract. The SIDR is a centralized database that contains records for all admissions to Air Force medical facilities since 1970. Air Force personnel receiving care in the hospitals of other services or in civilian institutions are also registered. Records from hospitalization in a civilian hospital are acquired at the time billings are submitted to the Air Force. Inpatient hospital record accessions at Army or Navy hospitals are obtained via a tri-service agreement that supports data standardization. Therefore, ascertainment of natality events among active duty women as recorded in the SIDR is assumed to be complete. Pregnancies are considered incident cases as women testing positive for pregnancy during an induction physical examination are not selected for active duty service. Women testing positive within 6 weeks of induction, during basic training, are also discharged from active duty service.

Based on the Standard Inpatient Data Record (SIDR) compiled by the Air Force Medical Support Agency, an ASCII data file was prepared by the Air Force containing the 1975-1994 hospitalization records for ADAF women with pregnancy-related ICD codes, plus the associated hospitalization records for babies up to thirty days old. Each woman's hospitalization records are identified with a person-specific ID number. This same person-specific ID number appears on the baby records for that individual's newborn children. Thus a woman with multiple pregnancy-related hospitalizations or one or more newborns can account for multiple records within the data set. There are a total of approximately 230,000 hospitalization records of which about 154,000 were for adults and about 76,000 were for newborns up to 30 days old. The adult hospitalizations are attributable to approximately 86,000 women. There were approximately 10,000 instances of women hospitalized for childbirth, for whom there was no corresponding newborn record. Thus, the data set does not include a newborn record corresponding to every mother record indicating childbirth. For newborns with serious health problems, there may be more than one hospitalization record. The ASCII data were read into a format suitable for use with statistical software, labeled, and analyzed with SPSS Version 7.5.

Air Force denominator data were obtained from the Human Resources Research Database (HRRD) maintained by the Armstrong Laboratory Human Resources Directorate. The Human Resources Directorate database is composed of approximately 460 unique data files containing historical personnel records of all Air Force personnel since 1956. Demographic profiles were constructed by the Air Force and provided as a series of Microsoft Excel

spreadsheets. They include the distribution of Air Force women from 1975-1994 by age, race, marital status, pay grade, occupation, and major command. The annual census reported for any given year varied slightly depending on the variable that was aggregated. Total census for age/race tables matched totals from the marital status tables. The pay grade and AFSC data summed to different annual totals, which differed by several thousand women. This discrepancy was adjusted by taking the percentage of women in each cell of the pay grade table and multiplying times the appropriate annual total from the age/race table. The process was repeated for AFSC. Normalizing the data yielded adjusted value tables for pay grade and AFSC that were comparable with the other demographic denominators. These data provide the baseline census of all Air Force women during the study interval.

Information for civilian comparisons was obtained from the Vital Statistics of the United States, Volume I - Natality, published annually by the National Center for Health Statistics and Current Population Reports, Population Characteristics, Volume P20-470, published by the U.S. Bureau of the Census.

B. Data Analysis

Using standard demography techniques (Shryock and Siegel, 1976), longitudinal analyses examined natality rates annually, every five years, and over the entire 20 year interval of time. Rates are also expressed within and between selected stratified variables. These variables

include age, race, marital status, rank, occupation, major command function, and geographic location.

Natality is "a general term representing the role of births in population change and human reproduction"(Shryock and Siegel, 1976, page 273). Other terms frequently encountered include fertility, births, fecundity, etc. We report age-specific birth rates as the number of live births (as indicated on the mother's inpatient record) per 1000 women of a specific age in the total Air Force population that year. Stillbirths, miscarriages, and abortions are not, by demographic definition, included in counts of live births. The most common natality statistic computed is the crude birth rate defined as number of births in a year per 1000 midyear population. Our study population is restricted to Air Force Active Duty women, not all Air Force members; therefore, we adopted the General Fertility Rate (number of births per 1000 women of childbearing age) as the best overall natality measure for our study. The US Vital Statistics calculation of GFR uses a denominator of women 15-44. Our calculations included all women between 17-44. Age-specific birth rates are the number of births to women in a given age group per 1000 women in that age group. This statistic is valuable for making detailed comparisons of natality trends within groups that may have different underlying age distributions (e.g. occupations and/or major commands). It has been noted that age probably has the greatest influence on rising and falling natality rates. The Total Fertility Rate is an age-adjusted summary statistic useful for comparing trends across time and populations but is of a different magnitude than the GFR. Equal weight is given to 5-year increments of the

actual age-specific birth rates within a group to calculate one overall statistic for comparison purposes.

The results are descriptive in nature due to the study design. However, natality trends over time and within occupational groups and major commands (when adjusted for differences in age composition) can provide insight into the impact of shifting demographics on birth rates and birth outcomes for the Air Force of the future. Descriptive and modeling data for natality and birth outcomes have not been available for military women in general, and for Air Force women in particular. Our results provide baseline demographic statistics that can be used for planning health services and serve as background rates for related studies.

C. Definition of Variables

Age. Mother's age (years) was recorded on the inpatient record at the time of admission and transferred to the SIDR. We categorized age into 5-year increments except for 17-19 years old and 45 years and above.

Rank. Military rank was recorded as paygrade (E1-E9 for enlisted personnel and O1-O6 for officers). We categorized rank as Enlisted Grades E1-E3; E4-E6; E7-E9; Company Grades O1-O3; and Field Grades O4 and above. For enlisted personnel, the three categories generally indicate those in their first enlistment (E1-E3), technical specialists (E4-E6), and senior career non-commissioned officers (E7-E9). Company Grade Officers (O1-O3) include

Lieutenants and Captains and Field Grade Officers (O4-O6) include Majors Lieutenant Colonels, and Colonels.

Race. Race was recorded on the inpatient record as white, black, other, Asian, and Native American. We categorized race as white, black, and all others.

Marital Status. Marital status was recorded on the inpatient record as married, not married, annulled, divorced, interlocutory, single-never married, and widowed. We categorized marital status as married or non-married.

Occupation. Occupation was recorded in the inpatient record as the Air Force Specialty Code (AFSC). Occupational categories were described by two different systems of Air Force Specialty Codes (AFSC) over the twenty-year study period. From 1975 to the early 1990s, a four-digit code with prefixes and suffixes was used for officer occupations. A five-digit code was used for enlisted personnel. A new alphanumeric code was introduced in 1993 but appears in some records prior to the official implementation date. The Defense Manpower Data Center protocol for converting Air Force Specialty Codes to DOD groups and Standard Occupational Codes (SOC - US Department of the Census, 1990) was used as guidance for standardization of occupational groups. We categorized occupations by enlisted or officer status and by primary work category. Officer categories were: Tactical Operations; Intelligence, Engineering, Maintenance; Scientists/Professionals; Health Care; Administration

/Executive Management; Supply/Procurement; and Other. Enlisted personnel categories were: Tactical Operations; Electrical/Communications/Intelligence; Health Care; Functional Support/Administration; Repair/Craftsman; Services; and, Other.

Major Command. Major Command of assignment was recorded on the inpatient record. The identifier "major command" may also indicate a direct reporting unit, field operation agency, or other organization entity within the military structure. Historically, the public is familiar with Strategic Air Command (SAC), North American Air Defense Command (NORAD) and more recently Air Combat Command (ACC). We categorized major commands according to their primary function: training; operations; logistics and R&D, and other.

Geographic Region. Historically, the Air Force has functioned in three general geographic regions: the continental United States; Pacific theater; and the European theater. In general, female personnel in the Pacific have predominantly been assigned to PACAF; those in Europe to USAFE; with the majority assigned in the continental United States.

III. Results and Conclusions

A. Demographic Characteristics of Air Force Women, 1975-1994

The purpose of this section is to provide the reader an appreciation for the actual numbers of women on active duty in the Air Force and the dramatic changes that have occurred over time. Age, race, marital status, paygrade, occupation, and geographic location are characteristics that have been reported to influence natality rates. Therefore, it is important for the reader to have the background information to put the 'rates' in perspective when interpreting the potential impact of natality on Air Force operations and the military health services system. As described previously, age is displayed as 17-19 years, 20-24 years, 25-29 years, 30-34 years, 35-39, years 35-39 years, 40-44 years, 45-49 years, and age unknown. Race is displayed as white, black, or other. Rank or pay grade is divided into three enlisted personnel categories (E1-3, E4-6, E7-9) and two officer categories (Company Grade (01-03) and Field Grade (04 and above)). Marital status is categorized as married or non-married. Air Force occupations are grouped into broad enlisted and officer categories that are reflective of the work accomplished and in general traceable to DOD and Bureau of Labor occupational categories. Major Command of assignment was aggregated according to the primary function of the command: training; operations; logistics and R&D, and other. Geographic area of assignment is based on the distribution of women in two "geographic" commands, USAFE and PACAF, in relation to the women on active duty not assigned to either USAFE or PACAF.

The total number of women on active duty during the period of 1975-1994 was 1,250,234 (Table 1). In 1975 there were approximately 30,335 women on active duty in the Air Force. The count of ADAF women peaked in 1987 with 76,003 women, and was at 66,168 in 1994 (Figure 1). Counts are based on end of year (December) census figures reported by the Air Force contrasted with more traditional mid-year figures, as end-of-year numbers are thought to be more stable in the Air Force population. The number of women between 17-19 years of age fluctuated over time with approximately 6,000 per year from 1975 to 1989 and declining to an average of 4,000 per year for the most recent 5-year period (1990-1994). The census for women ages 20-24 was approximately 22,000 per year for 1975-1979, rose to 29,000 per year for 1980-1984, declined slightly to 27,000 per year for 1985-1989, and was approximately 21,000 per year for 1990-1994. In contrast, the number of women between 25-44 rose dramatically in the 1980's and remained stable across all 5-year age groups in the 1990's. Women 25-29 years of age averaged slightly over 10,000 per year for 1975-1979; 19,000 for 1980-1984; 21,600 for 1985-1989; and, declined to 17,000 for 1990-1994. Women 30-34 years of age averaged 2100 per year for 1975-1979; 7400 for 1980-1984; 12,600 for 1985-1989; and, 12,700 for 1990-1994. The number of women over 35 years of age was relatively low into the early 1980's (averaging slightly less than 1500 for 1975-1979), but followed the same rising trend as the 25-34 year old group and by the 1990-1994 time period averaged 14,000 per year.

The racial distribution of ADAF women for the 20 year period 1974-1994 is shown in Table 2 and displayed in Figure 2. Approximately 80% of the workforce were classified as 'white' and slightly less than 20% were 'black'. A small proportion, less than 1%, was classified as 'other'. In the 1970's, black females were disproportionately represented in the younger age groups. By the 1990's, both major racial classifications were proportionally represented across all age groups.

The numbers and proportional distribution of ADAF women by Rank/Paygrade from 1975-1994 are shown in Table 3 and Figure 3. The proportion of women in the Field Grades has increased steadily since the mid-1980's. In 1994, 27% of women officers were Field Grade or above compared with 17% in the 1970's. The proportion of enlisted women in the higher enlisted ranks including the 'top three' (E7-9) has changed dramatically over time. In the 1990's, enlisted women are represented across all enlisted ranks and a significant proportion are in the senior enlisted grades (E7-9).

The marital status of ADAF women from 1974-1994 is displayed in Table 4 and Figure 4. The percent of married and unmarried women was approximately 40% and 60% respectively, in 1975. By the mid 1980's, the proportion was about 50%-50%, and in the 1990's has remained at about 60% married compared to 40% non-married. These changes in marital status composition are consistent with what would be expected given the changes in age and pay grade described.

The Air Force has a very extensive job classification protocol based on skills, knowledge, and training. The extensive and detailed Air Force Specialty Code system was reduced to the following 12 categories for Officer and Enlisted personnel:

Officer

- Tactical Operations
- Intelligence/Engineering/Maintenance
- Scientists/Professionals
- Health Care Field
- Administrators/Executives
- Supply/Procurement

Enlisted

- Tactical Operations
- Electronics/Communications/Intelligence
- Health Care Workers
- Functional Support/Administration
- Repairers/Craftsmen
- Services/Supply

The occupational distribution for the enlisted female workforce over the twenty-year study period is displayed in Table 5 and Figure 5. Over the entire twenty-year period, greater than 30% of the enlisted female workforce were in the Services/Supply occupational group. The

second most frequent work category for enlisted personnel was Health Care Workers (10%). The occupational distribution for the officer female workforce over the twenty-year study period is displayed in Table 6 and Figure 6. In contrast to the enlisted occupational distribution, greater than 40% of the female officers are in the Health Care Field. The second most frequent officer occupational grouping is Supply/Procurement. Over the decades, Air Force women's participation in all career fields expanded. Currently, greater than 98% of all Air Force occupational categories are open to women.

The majority of women in the Air Force are assigned to operational commands (Table 7). For the period 1975-1979, 60% of ADAF women were assigned to operational commands. From 1980-1994, this proportion remained constant at 65%. The proportion of ADAF women assigned to training commands ranged from 15-21% with an overall average of 17% for the period 1975-1994. Eight percent of ADAF women were assigned to Logistics, R&D (range of 7-8% per five year period); and 11% were assigned to other commands (range of 11-12%) (Figure 7).

From 1975-1994, the majority of ADAF women were assigned to stateside installations (Table 8). Approximately 10% of ADAF women were assigned to USAFE, a geographic command, predominantly located on the European continent and the British Isles.

Approximately 5% of all ADAF women were assigned to PACAF, a geographic command with installations throughout the Pacific but predominantly Japan, Korea, Philippines, and

Hawaii. The geographic assignment distribution of ADAF women has remained relatively consistent over the twenty-year study period (Figure 8).

In summary, ADAF women are well represented across all reproductive age groups today, a change from past decades. The racial composition of the Air Force has remained consistent over time, with approximately 80% of the force classified as white. Women are better represented in the senior paygrades today, also reflected in the changes in age distribution over time. The proportion of ADAF women married and non-married has changed from 40% married in the 1970's to 60% married in the 1990's. Enlisted women predominantly work in the Services/Supply occupational category, but an increasing proportion over the decades have entered non-traditional career fields such as Electronics/ Communication/ Intelligence. Most frequently, female officers have been in the Health Care Field, with incremental increases in other occupational groups over the decades. The distribution of ADAF women by functional command of assignment has not changed over the years. And, from 1975-1994, most ADAF women were assigned stateside, with an increasing proportion assigned overseas through the early 1990's.

B. Natality Experience of Active Duty Air Force Women, 1975-1994

In 1975, public law was changed to permit women who became pregnant to remain on active duty. Until this time, if a woman became pregnant, she was required to separate from active duty shortly after the birth of the child. We chose 1975 as an appropriate starting point for this study because in that year motherhood and an Air Force career became legally compatible.

B.1. Natal Events and Natality

Vital statistics for births are usually abstracted from birth certificates collected in the civil registry. The statistics presented in this report, however, were abstracted from electronically archived medical records of the ADAF mothers and their infants. The initial set of mother's records included an initial broad range of International Classification of Diseases (ICD) codes consistent with reproduction and delivery of an infant (630-676) recorded between 1975-1994. The entire record set was searched for International Classification of Disease (ICD) codes indicative of a birth event. Additionally, an Air Force special categorical code entitled 'presentation of fetus' was available in the data set. We defined a composite variable that used all sources of available information (Mother's ICD and "V code" diagnosis for hospitalization, newborn hospital records, and Presentation of fetus codes) to capture birth events. Overall, mother's ICD and "V code" identified 64,415 birth events, newborn records 75,942, and the presentation of fetus code 77,306 birth events. Comparative numbers and the efficiency of different search algorithms are shown in Table 9 and Figure 9. Using all sources

of information, the composite number of non-duplicated birth events among active duty Air Force women from 1975-1994 totaled 86,740.

B.2. Births Among Active Duty Air Force Women

From 1975-1994, Active Duty Air Force women experienced 87,014 livebirths and 585 stillbirths (Table 10). Between 1975-1979, there were 10,911 livebirths. From 1980-1984, the number of livebirths increased over twofold for a total of 25,389 in that 5-year period. The annual number of livebirths remained stable from 1985-1989 producing 26,779 births overall. For the period 1990-1994, the total number of livebirths declined to 23,935. Ninety-eight percent of the livebirths were singletons (85,400); slightly less than 2% were twins (1581); and, there were 33 triplets. Over the twenty-year period, stillbirths (585) represented less than 1% of all births.

B.3. Mother's Age at Parturition

The distribution of mother's age at parturition is displayed in Tables 11a and 11b. The average age at parturition from 1975-1994 was 24.8 years (median value of 24.0 years)(Table 12). From 1975 to 1994, the average age at parturition increased from 23 years of age to 26 years of age. The average age increased approximately one year for each 5 year increment from a mean (median) of 22.9 (22.4) years old in 1975-1979; 24.0 (23.4) years old in 1980-1984; 25.3 (24.8) years old in 1985-1989; and 25.8 (25.0) years old in 1990-1994 (Table 12).

The increasing age at parturition from the mid 1970s into the late 1980s is also reflective of the changing age and pay grade distribution of the Air Force female workforce.

B4. Parity

A direct calculation of parity for ADAF women was not possible. We used a variable in the data set labeled Family Member Prefix as an estimate of changing trends in parity. Family member prefix is a personnel variable with various financial and legal beneficiary implications, and it may not in all cases represent the number of children ever born and pregnancies experienced by the mother at the time of birth. However, it provides some information on trends in family size over time. Table 13 displays the classification of the infant's family member prefix at birth. In the last half of the 1970s, approximately 76% of the infants were categorized as first child with 16% categorized as 2nd child. The proportions shifted over time so that by the late 1980s, 63% of the newborns were classified as first children and 27% as second child. In the 1990s, the trend continued with 58% classified as first child and 29% as second child. These trends are consistent with the changing status of women in the Air Force from primarily entry-level employment (one enlistment) toward regular career employment.

B5. Live Birth Rates

The **General Fertility Rate (GFR)**, often referred to as the fertility rate, is defined in US Vital Statistics usage as the number of live births per 1,000 women of childbearing age (15-44). It is commonly used in US Census and Vital Statistics calculations. Differences in age composition within the childbearing years influence this rate and affect inter-group and intra-group comparison. The General Fertility Rate as applied to the active duty Air Force women is restricted to births to mothers between 17-44 years of age. The calculation of **Total Live Births per 1,000** women for all ages demonstrates the comparability of the statistic 'Total Live Birth Rate' among the Air Force population to the 'General Fertility Rate' as calculated with Air Force specific numbers. This is partially a reflection of restrictions on pregnancy upon entry to active duty and the overall age range of women on active duty. The Total Live Birth Rate is used as a summary statistic for those instances when age specific rates, General Fertility Rates, and/or Total Fertility Rates could not be calculated for variables of interest (Occupational Group, Major Command Function, Geographical Region). The **Total Fertility Rate (TFR)** summarizes a set of age-specific birth rates for the entire childbearing span. In US Vital Statistics calculations, the Total Fertility Rate is computed as the sum of the age-specific birth rates for each age group from 15-44 years of age. The TFR is an age-adjusted rate based on the assumption that there are the same number of women (1,000) in each year age group and, therefore, controls for differences between populations in the distribution of women within the childbearing years. We calculated the TFR for active duty Air Force women in the age range 17-44 years of age. In this section, the TFR is used as an age-

standardized summary rate for comparison of live birth rates within Air Force categories over the 1975-1994 time period. Total Live Birth Rates, General Fertility Rates, Total Fertility Rates, and Age-Specific Live Birth Rates for Active Duty Air Force Women from 1975-1994 are displayed in Table 14.

The General Fertility Rate (GFR) for Active Duty Air Force women over the twenty year period 1975-1994 was 70 live births per 1,000 women per year with yearly variations ranging from a low of 38 per 1,000 in 1975 to a high of 86 per 1,000 in 1982 (Table 14). The 5-year average GFR was 52 per 1,000 for 1975-1979; rose to 79 per 1,000 in 1980-1984; declined to 72 per 1,000 in 1985-1989; and remained stable at 70 per 1,000 for 1990-1994.

Age-specific birth rates for 1975-1994 are displayed in Table 14, Figure 14a, and Figures 14a1-14a7. The overall age-specific birth rate for 17-19 year olds for 1975-1994 was 38 per 1,000. For the 5 year period 1975-1979, the rate was 32 per 1,000, increased to 49 per 1,000 for 1980-1984, declined to 30 per 1,000 for 1985-1989, and increased to 42 per 1,000 for 1990-1994. The overall age-specific birth rate for 20-24 year olds for 1975-1994 was 87 per 1,000. For the 5 year period 1975-1979, the rate was 62 per 1,000, increased to 97 per 1,000 for 1980-1984, declined to 90 per 1,000 for 1985-1989, and increased to 96 per 1,000 for 1990-1994. The overall age-specific birth rate for 25-29 year olds for 1975-1994 was 81 per 1,000. For the 5 year period 1975-1979, the rate was 51 per 1,000, increased to 80 per 1,000 for 1980-1984, increased to 88 per 1,000 for 1985-1989, and increased to 93 per 1,000 for 1990-1994. The overall age-specific birth rate for 30-34 year olds for 1975-1994 was 55 per

1,000. For the 5 year period 1975-1979, the rate was 33.6 per 1,000, increased to 50.0 per 1,000 for 1980-1984, increased to 55.6 per 1,000 for 1985-1989, and increased to 61 per 1,000 for 1990-1994. The overall age-specific birth rate for 35-39 year olds for 1975-1994 was 24 per 1,000. For the 5 year period 1975-1979, the rate was 14 per 1,000, increased to 22 per 1,000 for 1980-1984, increased slightly to 25 per 1,000 for 1985-1989, and remained stable at 24 per 1,000 for 1990-1994. The overall age-specific birth rate for 40-44 year olds for 1975-1994 was 5 per 1,000. For the 5-year period 1975-1979, the rate was 1 per 1,000, increased to 6 per 1,000 for 1980-1984, increased slightly to 7 per 1,000 for 1985-1989, and declined to 4 per 1,000 for 1990-1994. The overall age-specific birth rate for active duty Air Force women 45 years and older for 1975-1994 was 1 per 1,000. For the 5-year period 1975-1979, there were no births recorded, the rate was 1.5 per 1,000 for 1980-1984, remained stable at 1.3 per 1,000 for 1985-1989, and was 1.1 per 1,000 for 1990-1994. Age-specific birth rates trends over time and comparisons between age groups are displayed in Figure 14a.

B6. Birth Rates By Racial Category

Live Births per 1,000, General Fertility Rates, Total Fertility Rates, and Age-Specific Births per 1,000 Active Duty Air Force Women by race (white, black, and all others) are displayed in Table 15.

For the period 1975-1994, the General Fertility Rate (GRF) for white active duty Air Force women was 70 per 1,000 compared with a GFR of 71 for black ADAF women, and 65 per 1,000 for all other racial groups combined (Table 15).

For the period 1975-1994, average age-specific live births per 1,000 ADAF women per year by race varied from 29- 46 per 1,000 for 17-19 year olds, 73-909 per 1,000 for 20-24 year olds, 77-83 for 25-29 year olds, 52-66 for 30-34 year olds, 21-28 for 35-39 year olds, and 4-9 for 40-44 year olds. For the 1975-1979 and 1980-1984 time periods, 5-year averages for black ADAF women's age-specific birth rates consistently exceeded those of both other and white ADAF women's rates in the 17-19, 20-24, and 25-29 year old groups. However, in the 1985-1989 time period, the only pronounced differences between black and white age-specific rates were observed in the 17-19 year old group (41 versus 28 per 1,000) and the rates for white 20-24 year olds (93 per 1,000) and white 30-34 year olds (88 per 1,000) were higher or equal to the rates for black ADAF women in these age groups (87 and 89 per 1,000 respectively). Over the 1990-1994 time period, the range of age-specific Live Births per 1,000 by race had decreased with race specific rates for 17-19 year olds of 40 for white ADAF women, 49 for black ADAF women, and 42 for other ADAF women. Race specific rates for 20-24 year old ADAF women were equivalent [96 (white), 96 (black), and 97 (other)]. Race specific rates for 25-29 year old ADAF women were 95 (white), 87 (black), and 92 (other). Race specific rates for 30-34 year old ADAF women were 63 (white), 54 (black), and 73 (other)]. Race specific rates for 35-39 year old ADAF women were 25 (white), 21 (black), and 33 (other)]. Race specific rates for 40-44 year old ADAF women

were 4 (white), 4 (black), and 8 (other)]. Race and Age-specific Live Births per 1,000 trends from 1975-1994 are displayed in Figures 15a-c.

The Total Fertility Rate (TFR) by race for the twenty-year period was 1373 (white), 1382 (black), and 1353 (other)(Table 15). Race-specific TFRs increased annually from 1975 -1982 and remained level from 1982-1992. For 1993-1994, white and black TFRs declined. Conversely, the TFR for other race ADAF women rose and exceeded both white and black TFRs in 1993-1994 (Figure 15d).

B7. Birth Rates by Marital Status

Birth Rates by marital status are displayed in Table 16. The average General Fertility Rate for Married ADAF women, 1975-1994, was 108 per 1,000 per year. The GFR for Married ADAF women increased from an average of 98 per 1,000 ADAF women per year for the time period 1975-1979 to 119 per 1,000 per year for 1980-1984. The GFR declined to an average of 111 per 1,000 per year for 1985-1989 and declined to 101 per 1,000 per year for 1990-1994.

The average General Fertility Rate for Non- Married ADAF women, 1975-1994, was 20 per 1,000 per year. The GFR for Non-Married ADAF women increased from an average of 12 per 1,000 per year for the time period 1975-1979 to 19 per 1,000 per year for 1980-1984, to 21 per 1,000 per year for 1985-1989, and to 26 per 1,000 per year for 1990-1994.

Not unexpectedly, the birth rate for Non-Married women was substantially less (one-fifth to one-fourth) that of Married ADAF women over the 1975-1994 time period. However, Total Fertility Rates for both Married and Non-Married ADAF women increased steadily over the 20 year period with a low five year annual average TFR of 1847 and 180 for Married and Non-Married respectively in 1975-1979, 2457 and 304 respectively in 1980-1984, 2440 and 373 respectively in 1985-1989, and 2589 and 509 in 1990-1994 (Figure 16c). Additionally, the rate ratio of total births per 1,000 Non-Married ADAF women contrasted with Married ADAF women increased steadily over the 20 year period with an overall proportion of 19% (1975-1994) of the Total Live Births per 1,000 ADAF women to Non-Married personnel women with proportional changes of 12% for 1975-1979, 16% for 1980-1984, 19% for 1985-1989, and 26% for 1990-1994.

B8. Birth Rates By Rank/Pay Grade

Live births per 1,000, General Fertility Rates, Total Fertility Rates, and Age-Specific Births per 1,000 by Enlisted Grades E1-E3, E4-6, E7-9, Company Grades O1-3, and Field Grades O4 and above are displayed in Table 17.

Birth Rates for Enlisted Grades.

The overall average General Fertility Rate for Enlisted Grades E1-3 for 1975-1994 was 68 per 1,000 ADAF women per year. The annual average GFR was 47 per 1,000 E1-3 women for the 1975-1979 time period, rose to 77 per 1,000 for 1980-1984, declined to 70 per 1,000 for 1985-1989, and increased to 81 per 1,000 E1-3 enlisted women for 1990-1994. Age-Specific Live Births per 1,000 trends over time for Enlisted Grades E1-3 are displayed in Figure 17a.

The overall average General Fertility Rate for Enlisted Grades E4-6 for 1975-1994 was 80 per 1,000 ADAF women per year. The annual average GFR was 71 per 1,000 E4-6 women for the 1975-1979 time period, rose to 92 per 1,000 for 1980-1984, declined to 81 per 1,000 for 1985-1989, and declined to 73 per 1,000 E4-6 enlisted women for 1990-1994. Age-Specific Live Births per 1,000 trends over time for Enlisted Grades E4-6 are displayed in Figure 17b.

The overall average annual General Fertility Rate for Enlisted Grades E7-9 for 1975-1994 was 15 per 1,000 ADAF women per year. The annual average GFR was 13 per 1,000 E7-9 women for the 1975-1979 time period, rose to 26 per 1,000 for 1980-1984, declined to 19 per 1,000 for 1985-1989, and declined to 13 per 1,000 E7-9 enlisted women for 1990-1994. Age-Specific Live Births per 1,000 trends over time for Enlisted Grades E7-9 are displayed in Figure 17c.

Birth Rates for Company and Field Grades.

The average General Fertility Rate for Company Grades O1-3 for 1975-1994 was 49 per 1,000 ADAF women per year. The 5-year average GFR for the 1975-1979 time period was 28 per 1,000 O1-3 women, rose to 49 per 1,000 for 1980-1984, increased slightly to 52 per 1,000 for 1985-1989, and increased to 57 per 1,000 Company Grades O1-3 per year for 1990-1994. Age-Specific Live Births per 1,000 trends over time for Company Grades O1-3 are displayed in Figure 17d. The average General Fertility Rate for Field Grades O4 and above for 1975-1994 was 30 per 1,000 ADAF women per year. The 5-year average GFR was 10 per 1,000 O4+ women for the 1975-1979 time period, rose to 24 per 1,000 for 1980-1984, increased to 35 per 1,000 for 1985-1989, and remained constant at 33 per 1,000 Field Grades O4 and above women per year for 1990-1994. Age-Specific Live Births per 1,000 trends over time for Field Grades O4 and above are displayed in Figure 17e. Total Fertility Rates for ADAF Women Officers and Enlisted Grades for 1975-1994 are displayed in Table 17 and compared in Figure 17f. Over the 20-year period, the TFR for Officers was less than the TFR for Enlisted Grades. The TFR for both groups peaked in the early 1980's, remained consistent until 1990, with the Officer TFR rising until 1992, and both groups declining in 1993-1994.

B9. Birth Rates By Occupational Group

Enlisted Occupational Categories.

Enlisted personnel categories were: Tactical Operations; Electrical/ Communications/ Intelligence; Health Care; Functional Support/ Administration; Repair/ Craftsman; Services/ Supply; and, Other. Live Births per 1,000, General Fertility Rates, Total Fertility Rates, and Age-Specific Live Births per 1,000 Active Duty Air Force (ADAF) Women by Enlisted Job Group, 1975-1994 are displayed in Table 18.

General Fertility Rates for enlisted occupational categories for the 1975-1994 period averaged: 60 per 1,000 per year for Tactical Operations; 55 per 1,000 per year for Electrical/ Communications/ Intelligence; 72 per 1,000 per year for Health Care; 65 per 1,000 per year for Functional Support/ Administration; 45 per 1,000 per year for Repair/ Craftsman; and 65 per 1,000 per year for Services/ Supply. The GFR for Tactical Operations was 64 per 1,000 per year for 1975-1979, rose to 72 per 1,000 for 1980-1984, declined to 68 per 1,000 for 1985-1989, and declined to 54 per 1,000 per year for the 1990-1994 time period. The GFR for Electrical/ Communications/ Intelligence was 36 per 1,000 per year for 1975-1979, increased to 55 per 1,000 for 1980-1984, increased to 59 per 1,000 for 1985-1989, and increased to 67 per 1,000 per year for the 1990-1994 time period. The GFR for Health Care was 60 per 1,000 per year for 1975-1979, increased to 79 per 1,000 for 1980-1984, declined to 69 per 1,000 for 1985-1989, and increased to 74 per 1,000 per year for the 1990-1994 time

period. The GFR for Functional Support/ Administration was 57 per 1,000 per year for 1975-1979, increased to 85 per 1,000 for 1980-1984, declined to 51 per 1,000 for 1985-1989, and increased to 61 per 1,000 per year for the 1990-1994 time period. The GFR for Repair/ Craftsmen was 45 per 1,000 per year for 1975-1979, increased to 72 per 1,000 for 1980-1984, declined to 35 per 1,000 for 1985-1989, and increased to 39 per 1,000 per year for the 1990-1994 time period. The GFR for Services/ Supply was 64 per 1,000 per year for 1975-1979, increased to 74 per 1,000 for 1980-1984, declined to 64 per 1,000 for 1985-1989, and declined to 55 per 1,000 per year for the 1990-1994 time period.

Average Age-Specific Births per 1,000 per year for 1975-1994 by occupational category for 17-19 year olds ranged from a low of 28 per 1,000 per year for Electrical/ Communications/ Intelligence to a high of 39 per 1,000 per year for Functional Support/ Administration. Age-Specific Births per 1,000 for 20-24 year olds ranged from a low of 59 per 1,000 per year for Repair/ Craftsmen and Electrical/ Communications/ Intelligence to a high of 90 per 1,000 per year for Functional Support/ Administration. Age-Specific Births per 1,000 for 1975-1994 by occupational category for 25-29 year olds ranged from a low of 51 per 1,000 per year for Repair/ Craftsmen to a high of 85 per 1,000 per year for Functional Support/ Administration. Age-Specific Births per 1,000 for 30-34 year olds ranged from a low of 26 per 1,000 per year for Repair/ Craftsmen to a high of 50 per 1,000 per year for Electrical/ Communications/ Intelligence. Age-Specific Births per 1,000 for 1975-1994 by occupational category for 35-39 year olds ranged from a low of 11 per 1,000 per year for Repair/ Craftsmen to a high of 21 per 1,000 per year for Electrical/ Communications/ Intelligence. Age-Specific Births per

1,000 for 1975-1994 for 40-44 year olds was in the 2-4 per 1,000 range for all enlisted occupational categories. Trends in Age-Specific Rates per 1,000 per year, 1975-1994, for each enlisted occupational group are shown in Figures 18a-18g.

Total Fertility Rates for 1975-1994 by occupational category ranged from a low of 839 for Repair/ Craftsmen to a high of 1305 for both Health Care and Functional Support/ Administration. Trends in Total Fertility Rates from 1975-1994 by enlisted occupational category are shown in Figure 18h.

Commissioned Officer Occupational Categories.

Officer occupational categories were: Tactical Operations; Intelligence/ Engineering/ Maintenance; Scientists/ Professionals; Health Care; Administration/ Executive Management; Supply/ Procurement; and Other. Live Births per 1,000, General Fertility Rates, Total Fertility Rates, and Age-Specific Live Births per 1,000 Active Duty Air Force (ADAF) Women by Officer Job Group, 1975-1994 are displayed in Table 19.

General Fertility Rates for officer occupational categories for the 1975-1994 period averaged: 31 per 1,000 per year for Tactical Operations; 37 per 1,000 per year for Intelligence/ Engineering/ Maintenance; 30 per 1,000 per year for Scientists/ Professionals; 46 per 1,000 per year for Health Care; 50 per 1,000 per year for Administration/ Executive Management; 34 per 1,000 per year for Supply/ Procurement; and 37 per 1,000 per year for Other Officers.

The GFR for Tactical Operations was 16 per 1,000 per year for 1975-1979, rose to 29 per 1,000 for 1980-1984, increased to 32 per 1,000 for 1985-1989, and increased to 35 per 1,000 per year for the 1990-1994 time period. The GFR for Intelligence/ Engineering/ Maintenance was 21 per 1,000 per year for 1975-1979, rose to 43 per 1,000 for 1980-1984, declined to 33 per 1,000 for 1985-1989, and increased to 43 per 1,000 per year for the 1990-1994 time period. The GFR for Scientists/ Professionals was 27 per 1,000 per year for 1975-1979, rose to 36 per 1,000 for 1980-1984, declined to 31 per 1,000 for 1985-1989, and declined to 27 per 1,000 per year for the 1990-1994 time period. The GFR for Health Care was 26 per 1,000 per year for 1975-1979, rose to 48 per 1,000 for 1980-1984, increased to 50 per 1,000 for 1985-1989, and remained stable at 51 per 1,000 per year for the 1990-1994 time period. The GFR for Administration/ Executive Management was 33 per 1,000 per year for 1975-1979, rose to 46 per 1,000 for 1980-1984, increased to 51 per 1,000 for 1985-1989, and increased to 54 per 1,000 per year for the 1990-1994 time period. The GFR for Supply/ Procurement was 24 per 1,000 per year for 1975-1979, rose to 32 per 1,000 for 1980-1984, increased to 38 per 1,000 for 1985-1989, and declined to 35 per 1,000 per year for the 1990-1994 time period.

Age-Specific Births per 1,000 for 1975-1994 by occupational category for 20-24 year olds ranged from a low of 7 per 1,000 per year for Supply/ Procurement to a high of 25 per 1,000 per year for Health Care. Age-Specific Births per 1,000 for 1975-1994 by occupational category for 25-29 year olds ranged from a low of 37 per 1,000 per year for Supply/ Procurement to a high of 65 per 1,000 per year for Scientist/ Professional. Age-Specific

Births per 1,000 for 30-34 year olds ranged from a low of 39 per 1,000 per year for Supply/ Procurement and Health Care to a high of 89 per 1,000 per year for Scientist/ Professional. Age-Specific Births per 1,000 for 1975-1994 by occupational category for 35-39 year olds ranged from a low of 21 per 1,000 per year for Health Care and Tactical Operations (22 per 1,000) to a high of 48 per 1,000 per year for Administrative/ Executive. Age-Specific Births per 1,000 for 1975-1994 for 40-44 year olds was in the 3-6 per 1,000 per year range for all officer occupational categories except for Administrative/ Executive (15 per 1,000 per year). Trends in Age-Specific Rates per 1,000 per year, 1975-1994, for each officer occupational group are shown in Figures 19a-f.

Trends in Total Fertility Rates from 1975-1994 by officer occupational category are shown in Figure 19g.

B9. Birth Rates By Major Command Function

Major Commands were categorized according to their primary function: training; operations; logistics and R&D, and all others. Live Births per 1,000 Active Duty Air Force (ADAF) Women by Major Command Function for 1975-1994 are displayed in Table 20a. Average Live Births per 1,000 ADAF women per year for 1975-1994 were 41 for Training, 70 for Operations, 69 for Logistics R&D, and 25 for All Others.

Five-year averages for Training Command Functions were 27 per 1,000 per year for 1975-1979, increased to 41 per 1,000 for 1980-1984, increased to 47 per 1,000 for 1985-1989, and remained stable at 46 per 1,000 per year for 1990-1994. Five-year averages for Operations Command Functions were 61 per 1,000 per year for 1975-1979, increased to 79 per 1,000 for 1980-1984, declined to 71 per 1,000 for 1985-1989, and declined to 66 per 1,000 per year for 1990-1994. Five year averages for Logistics R&D Command Functions were 57 per 1,000 per year for 1975-1979, increased to 77 per 1,000 for 1980-1984, declined to 71 per 1,000 for 1985-1989, and declined to 67 per 1,000 per year for 1990-1994. Five-year averages for All Other Command Functions were 39 per 1,000 per year for 1975-1979, declined to 33 per 1,000 for 1980-1984, declined to 13 per 1,000 for 1985-1989, and increased to 22 per 1,000 per year for 1990-1994.

Trends for Live Births per 1,000 ADAF women by major Command Function for 1975-1994 are displayed in Figure 20. Rates rose consistently for Training, Operations, and Logistics R&D Commands from 1975-1982. Operations and Logistics R&D Command rates declined in parallel from 1982-1994. Live Birth rates per 1,000 for Training Commands rose slightly over the same time period. Live Birth rates per 1,000 were equivalent for officers and enlisted women in Training Commands (40 and 41 per 1,000 respectively)(Table 20b). Live Birth Rates per 1,000 for enlisted women in Operations and Logistics R&D Commands were approximately twice those for officers (75/42 and 82/42 respectively)(Figures 20a and 20b).

B10. Birth Rates By Geographical Region

Live Births per 1,000 Active Duty Air Force (ADAF) Women by Geographical Region of assignment (Continental United States, Europe, and Pacific) are displayed in Table 21a.

The overall annual average by region for 1975-1994 was 62 Live Births per 1,000 per year for ADAF women stationed in the United States, 52 Live Births per 1,000 for ADAF women stationed in Europe, and 37 Live Births per 1,000 per year for ADAF women stationed in the Pacific. Regional rates for the enlisted force consistently exceeded the rates for officers (67/41 in the United States, 55/29 for Europe, and 39/28 for the Pacific)(Table 21b.). Trends over time by geographical region and rank/paygrade are displayed in Figures 21, 21a, and 21b.

C. Comparison of Air Force Natality with US Population Vital Statistics

Because measures of Air Force natality are based on hospitalization and personnel demographic records, and those for the general US population are based on registered births and survey data, the two are not strictly comparable. Nevertheless, where possible, it is useful to make comparisons between natality of women in the Air Force and in the general female population. As career opportunities for women in the Air Force have matured and stabilized, one would expect that over time natality measures for these women would also tend to stabilize and eventually parallel those of women in the general population. Because of differences in career demands and some non-comparability of natality data one would not expect measures for the two populations to be the same. By all the measures employed, however, there are clear consistencies in the patterns of similarities and differences that emerge over the study period.

Summary demographic measures of fertility (i.e. age specific, general, and total fertility rates for Air Force women for each year) are provided for comparison to those for women in the general United States population (Tables 14-15, 22-26). Because of the difference in beginning age of these measures (17 for Air Force women and 15 for US women) the rates are not precisely comparable. This is especially true for the general fertility rate and the total fertility rate, which are summary measures over all included ages. Therefore, the greater interest is in patterns of change rather than in specific comparisons of these rates. Some limited analysis focusing on selected age specific rates is also included.

The annual Air Force general fertility rate rose from approximately 50 births per 1000 women aged 17-44 per year in the 1970s to a peak of 70 per 1000 in the early 1980s. Since that peak, the rate declined steadily through 1994 (Table 28). Fertility of both black and white women in the Air Force followed the same general pattern; however, the general fertility rates of white women peaked at, and remained at, a somewhat higher level than those of black women. During the same period (ending in 1993), the general fertility rates of black and white women in the general US population remained nearly unchanged. Total fertility rates in the Air Force and the general population followed essentially the same paths as the general fertility rates.

Because of the difference in starting ages for the general and total fertility rates in the Air Force and US data, it is useful to focus on measures that are similarly defined. For this purpose trends in rates at the peak fertility ages--20-24 to 30-34--were chosen for analysis (Figures 28b and 28c). A comparison of these rates in the two populations shows the same temporal pattern as the general and total rates--i.e. a rise in Air Force fertility from 1975 to a peak in the early 1980s followed by a plateau or slight decrease. The trends are the same in both the white and black Air Force population (Figures 28b-28d). For summary purposes, a "truncated" total fertility rate restricted to the interval 20-34 years of age was calculated (Figure 28e). This measure again shows the same pattern in trends. Except for the early part of the period, black and white women had virtually identical fertility. Truncated total fertility rates for the US female population were consistently higher than those of Air Force women, the latter averaging about 20 percent lower than the former since the early 1980s.

Some comparisons can be made between Air Force and US employed women. While period fertility rates of the general US female population on average are higher than those of women in the Air Force, the latter have had consistently higher fertility rates than employed women in the United States labor force (Figures 27a-b). This finding is among the more surprising results of this study. A comparison of the data in Tables 27a-b shows that fertility rates of Air Force women averaged over 50 per cent higher than those of the general population of employed women from 1980 forward. These differences were recorded in both broad age groups 18-29 (17-29 for ADAF women) and 30-44. Just why this should have been the case is unknown. A small amount of the difference may be attributable to underlying differences in the data sources. Information on fertility of employed US women comes from responses to questions about births in the previous year which are provided by women included in the Bureau of the Census Current Population Survey. These responses may understate fertility slightly, but not enough to account for the differences evident in the data. A satisfactory explanation of the higher fertility of ADAF women over US employed women must await further research; however, it may be speculated that some of the difference may be attributable to the expectation by ADAF women of stable employment and readily available excellent health services in the Air Force.

D. Future Projections

Air Force natality rates are most strongly influenced by changing trends in age and marital status. As more women choose to stay on active duty past their initial commitment, several factors influencing overall natality rates converge. Women enter the age groups with the highest reproductive rates, are more likely to enter a period of career stability, and are more likely to begin families.

General Fertility Rates appeared to stabilize in the 1985- 94 time frame with overall annual averages ranging from 70- 74 per 1,000 per year in nine of the ten years. For the most reproductively active age groups, natality rates ranged from 84-102 per 1,000 per year for ADAF women 20-24 years old and 79- 98 per 1,000 per year for 25-29 year olds (Table 14).

By the 1990's, 54% of ADAF women were married compared with 44% in the 1970's (Table 4). In the 1990's, birth rates for married ADAF women were approximately 4 times higher than birth rates for non-married women (Table 16). This would equate to an incremental change of an additional 3 births per 1,000 ADAF women with an additional 10 % increase in the proportion of married ADAF women to 64% of the force. If 75% of ADAF women were married, the Air Force could expect an additional 8 births per 1,000 ADAF women over and above the 1990-94 average.

From 1990-94 women 20-29 years old represented 55% of all ADAF women and contributed 75% of the births. If the proportion of ADAF women in this age range increases above its current representation of 55% of the total female population, overall birth rates could increase 14% to 40% over current expectations. Conversely, if the proportion of 20-29 year old ADAF women declines, natality rates would be expected to decline.

The proportion of women with second, third, and fourth births increased incrementally over the twenty-year period. (Table 13). As discussed previously, this reflects the integration of ADAF women into the career Air Force. For 1990-1994, 29 % of the births were second children, 7% were third children, and 6% were fourth or higher. Trends over time indicate that many ADAF women found no conflict between active duty status and raising a family. This conclusion is supported by the comparison between ADAF natality rates with their civilian counterparts.

As the number of airmen on active duty in the Air Force continues to decline as a result of general reduction in the size of all armed forces, the absolute number of births will decline proportionate to the number of women on active duty. However, it is expected that with eventual stabilization of recruitment numbers and a maturation of the women remaining on active duty, that births will continue as significant life events among Air Force women. Natality will impact the social structure of the Air Force work force and will remain an issue of occupational health concern as women are further integrated into non-traditional career fields.

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Table 1. Active Duty Air Force (ADAF) Women Census, 1975-1994

Year	Total		17-19		20-24		25-29		30-34		35-39		40-44		45-49		Unknown	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1975	30335	13.0	3942	13.0	17543	57.8	6239	20.6	1122	3.7	637	2.1	482	1.6	350	1.2	20	0.1
1976	36960	15.3	5640	15.3	20289	54.9	7999	21.6	1468	4.0	654	1.8	468	1.3	293	0.8	149	0.4
1977	41521	14.5	6037	14.5	22308	53.7	9819	23.6	1942	4.7	690	1.7	437	1.1	282	0.7	6	0.0
1978	48295	14.8	7148	14.8	24329	50.4	12775	26.5	2588	5.4	720	1.5	456	0.9	274	0.6	5	0.0
1979	54822	13.9	7612	13.9	27204	49.6	15004	27.4	3481	6.3	765	1.4	498	0.9	251	0.5	7	0.0
1975-1979	211933	14.3	30379	14.3	111673	52.7	51836	24.5	10601	5.0	3466	1.6	2341	1.1	1450	0.7	187	0.1
1980	61039	13.1	8001	13.1	29605	48.5	17121	28.0	4606	7.5	930	1.5	501	0.8	250	0.4	25	0.0
1981	63672	10.9	6927	10.9	30273	47.5	18563	29.2	5886	9.2	1236	1.9	506	0.8	261	0.4	20	0.0
1982	64924	8.4	5458	8.4	29932	46.1	19637	30.2	7460	11.5	1629	2.5	536	0.8	237	0.4	35	0.1
1983	65827	6.9	4572	6.9	28994	44.0	20472	31.1	8876	13.5	2090	3.2	571	0.9	246	0.4	6	0.0
1984	66970	6.7	4508	6.7	27642	41.3	21036	31.4	10185	15.2	2745	4.1	592	0.9	260	0.4	2	0.0
1980-1984	322432	9.1	29466	9.1	146446	45.4	96829	30.0	37013	11.5	8630	2.7	2706	0.8	1254	0.4	88	0.0
1985	70546	8.2	5811	8.2	27210	38.6	21607	30.6	11403	16.2	3534	5.0	722	1.0	257	0.4	2	0.0
1986	74289	9.0	6694	9.0	27467	37.0	22148	29.8	12351	16.6	4448	6.0	925	1.2	254	0.3	2	0.0
1987	76003	8.6	6567	8.6	27192	35.8	22184	29.2	12992	17.1	5585	7.3	1203	1.6	280	0.4	0	0.0
1988	75079	7.7	5784	7.7	25819	34.4	21625	28.8	13319	17.7	6700	8.9	1498	2.0	319	0.4	15	0.0
1989	75950	7.9	5964	7.9	26146	34.4	20462	26.9	13105	17.3	7816	10.3	2031	2.7	328	0.4	98	0.1
1985-1989	371867	8.3	30820	8.3	133834	36.0	108026	29.0	63170	17.0	28083	7.6	6379	1.7	1438	0.4	117	0.0
1990	73437	6.7	4919	6.7	22852	31.1	19745	26.9	13901	18.9	8917	12.1	2690	3.7	400	0.5	13	0.0
1991	71326	5.7	4087	5.7	21500	30.1	18268	25.6	13857	19.4	9749	13.7	3309	4.6	553	0.8	3	0.0
1992	67137	6.9	4631	6.9	19962	29.7	16188	24.1	12228	18.2	9603	14.3	3830	5.7	694	1.0	1	0.0
1993	65934	6.7	4442	6.7	19610	29.7	15484	23.5	11783	17.9	9475	14.4	4262	6.5	838	1.3	40	0.1
1994	66168	3.8	2504	3.8	20351	30.8	15857	24.0	11894	18.0	9675	14.6	4786	7.2	1051	1.6	50	0.1
1990-1994	344002	6.0	20583	6.0	104275	30.3	85542	24.9	63663	18.5	47419	13.8	18877	5.5	3536	1.0	107	0.0
1978-1994	1250234	8.9	111248	8.9	496228	39.7	342233	27.4	174447	14.0	87598	7.0	30303	2.4	7678	0.6	499	0.0

Figure 1. Number of ADAF Women by Age Group, 1975-1994

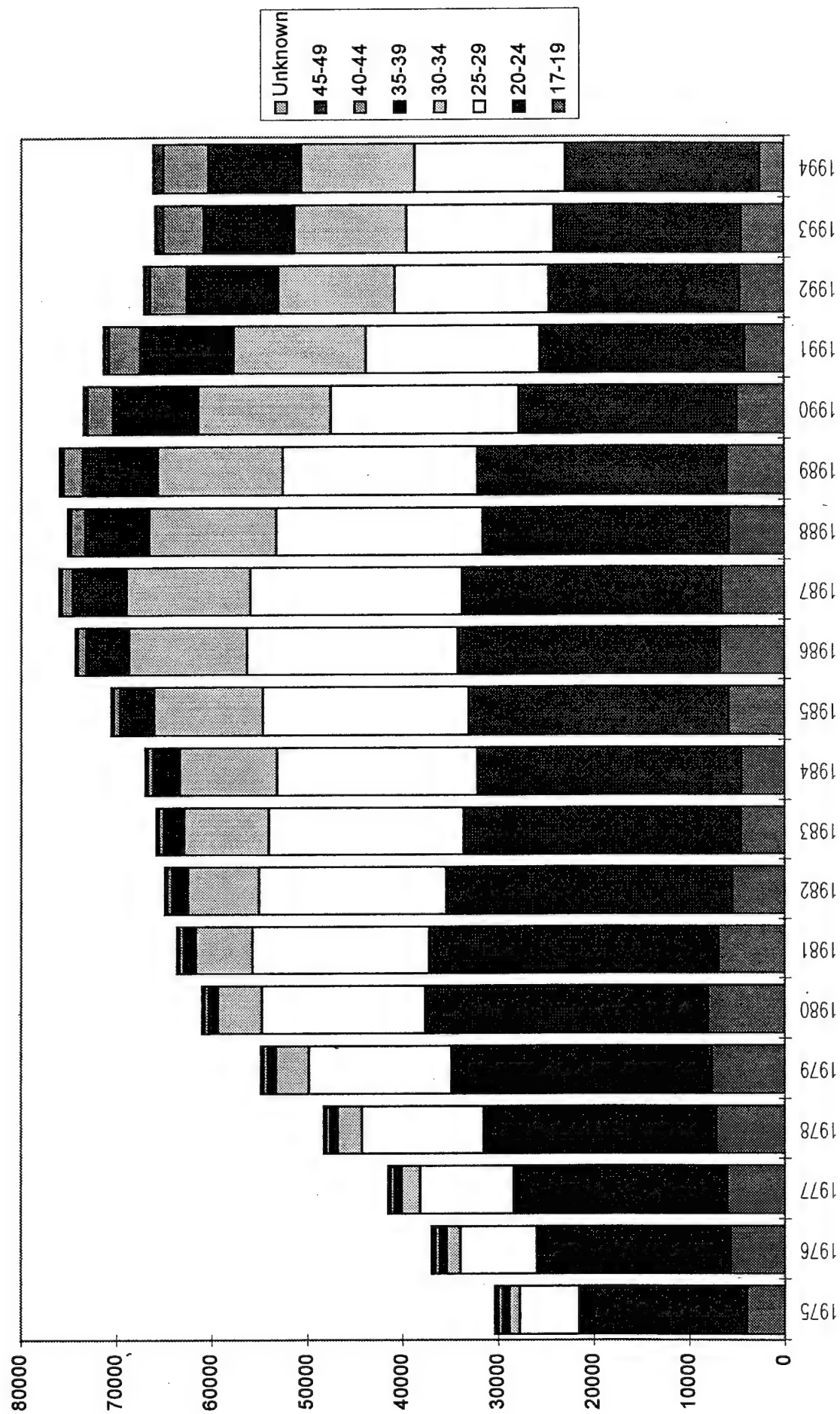


Table 2. Distribution of Active Duty Air Force (ADAF) Women by Race, 1975-1994

Year	Total N	White		Black		Other	
		N	%	N	%	N	%
1975	30335	25025	82.5	4892	16.1	418	1.4
1976	36960	30585	82.8	5603	15.2	772	2.1
1977	41521	34232	82.4	6228	15.0	1061	2.6
1978	48295	39290	81.4	7642	15.8	1363	2.8
1979	54822	44000	80.3	9171	16.7	1651	3.0
1975-1979	211933	173132	81.7	33536	15.8	5265	2.5
1980	61039	48713	79.8	10497	17.2	1829	3.0
1981	63672	50462	79.3	11305	17.8	1905	3.0
1982	64924	50742	78.2	12232	18.8	1950	3.0
1983	65827	51008	77.5	12797	19.4	2022	3.1
1984	66970	51281	76.6	13522	20.2	2167	3.2
1980-1985	322432	252206	78.2	60353	18.7	9873	3.1
1985	70546	53426	75.7	14680	20.8	2440	3.5
1986	74289	55684	75.0	15832	21.3	2773	3.7
1987	76003	56627	74.5	16378	21.5	2998	3.9
1988	75079	55704	74.2	16335	21.8	3040	4.0
1989	75950	56749	74.7	15951	21.0	3250	4.3
1985-1990	371867	278190	74.8	79176	21.3	14501	3.9
1990	73437	54129	73.7	16137	22.0	3171	4.3
1991	71326	52568	73.7	15587	21.9	3171	4.4
1992	67137	49622	73.9	14471	21.6	3044	4.5
1993	65934	48579	73.7	14241	21.6	3114	4.7
1994	66168	48597	73.4	14308	21.6	3263	4.9
1990-1994	344002	253495	73.7	74744	21.7	15763	4.6
1975-1994	1250234	957023	76.5	247809	19.8	45402	3.6

Figure 2. Number of ADAF Women by Race, 1975-1994

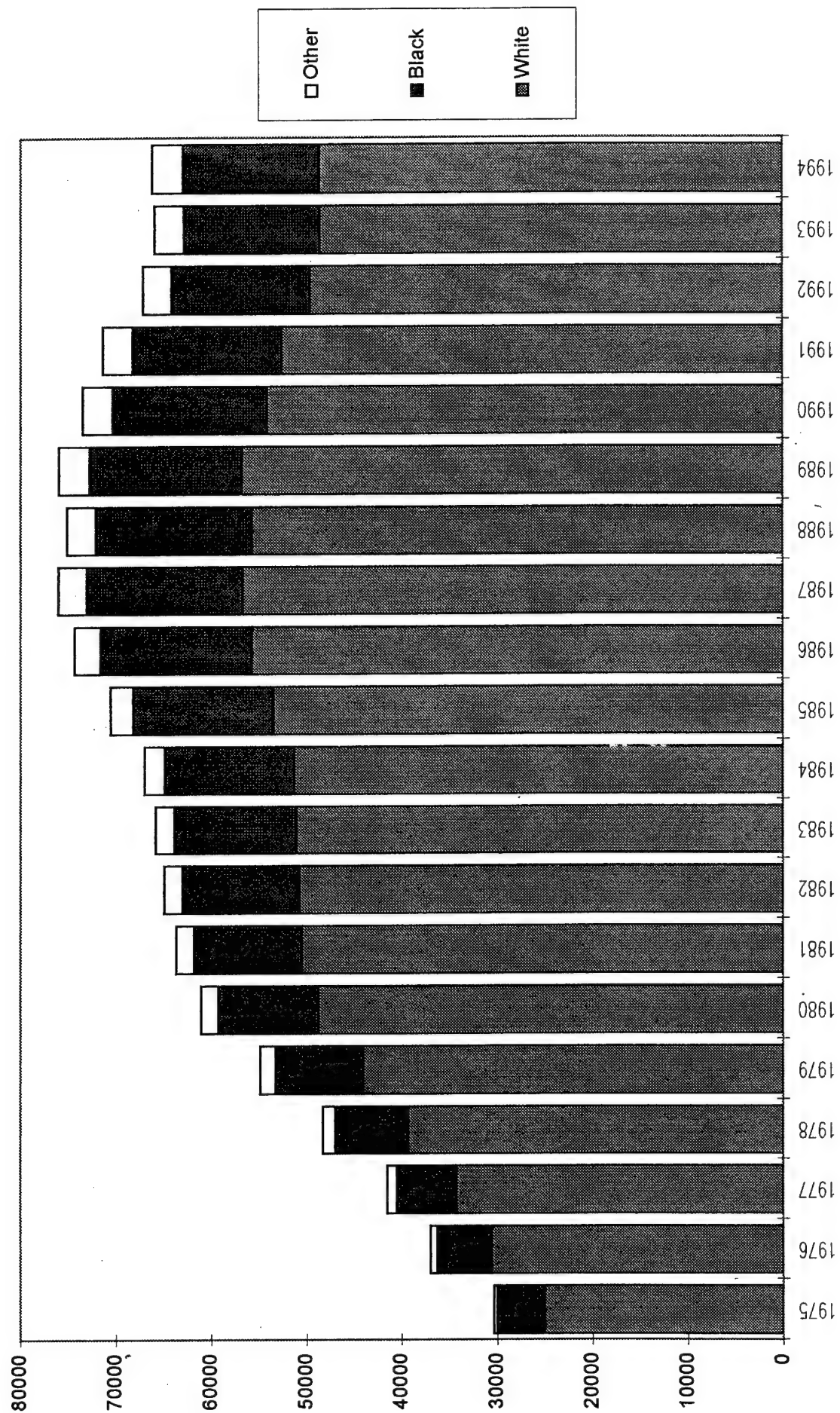


Table 3. Distribution of Active Duty Air Force (ADAF) Women by Rank/Paygrade, 1975-1994

Paygrade/Rank census was taken at a different time of year than Age/Race/Marital Status census.
Paygrade/Rank data was adjusted to correspond to proportional distribution in Age/Race/Marital Status census.

Year	Total N	E1-E3		E4-E6		E7-E9		O1-O3		O4+	
		N	%	N	%	N	%	N	%	N	%
1975	30335	17879	58.9	7576	25.0	112	0.4	3829	12.6	939	3.1
1976	36960	19963	54.0	11561	31.3	127	0.3	4288	11.6	1021	2.8
1977	41521	21655	52.2	14251	34.3	133	0.3	4416	10.6	1066	2.6
1978	48295	25335	52.5	16736	34.7	129	0.3	5026	10.4	1069	2.2
1979	54822	27345	49.9	19706	35.9	136	0.2	6560	12.0	1075	2.0
1975-1979	211933	112178	52.9	69831	32.9	637	0.3	24118	11.4	5169	2.4
1980	61039	27654	45.3	24365	39.9	164	0.3	7737	12.7	1119	1.8
1981	63672	24231	38.1	29774	46.8	212	0.3	8326	13.1	1129	1.8
1982	64924	22818	35.1	31629	48.7	274	0.4	9011	13.9	1192	1.8
1983	65827	21988	33.4	32699	49.7	372	0.6	9418	14.3	1349	2.0
1984	66970	21307	31.8	33870	50.6	540	0.8	9746	14.6	1507	2.2
1980-1984	322432	117998	36.6	152338	47.2	1562	0.5	44239	13.7	6296	2.0
1985	70546	22535	31.9	35210	49.9	799	1.1	10306	14.6	1696	2.4
1986	74289	24653	33.2	35843	48.2	1169	1.6	10711	14.4	1913	2.6
1987	76003	25007	32.9	36609	48.2	1613	2.1	10622	14.0	2151	2.8
1988	75079	21778	29.0	38291	51.0	2094	2.8	10454	13.9	2462	3.3
1989	75950	20153	26.5	39955	52.6	2553	3.4	10559	13.9	2730	3.6
1985-1989	371867	114126	30.7	185909	50.0	8229	2.2	52653	14.2	10951	2.9
1990	73437	17654	24.0	39355	53.6	3102	4.2	10274	14.0	3052	4.2
1991	71328	16250	22.8	38251	53.6	3615	5.1	9887	13.9	3323	4.7
1992	67137	15654	23.3	34911	52.0	4091	6.1	8941	13.3	3539	5.3
1993	65934	15635	23.7	33717	51.1	4412	6.7	8507	12.9	3664	5.6
1994	66168	16140	24.4	33288	50.3	4545	6.9	8478	12.8	3716	5.6
1990-1994	344002	81334	23.6	179522	52.2	19764	5.7	46087	13.4	17294	5.0
1975-1994	1250234	425636	34.0	587599	47.0	30192	2.4	167096	13.4	39710	3.2

Figure 3. Number of ADAF Women by Rank/Paygrade, 1975-1994

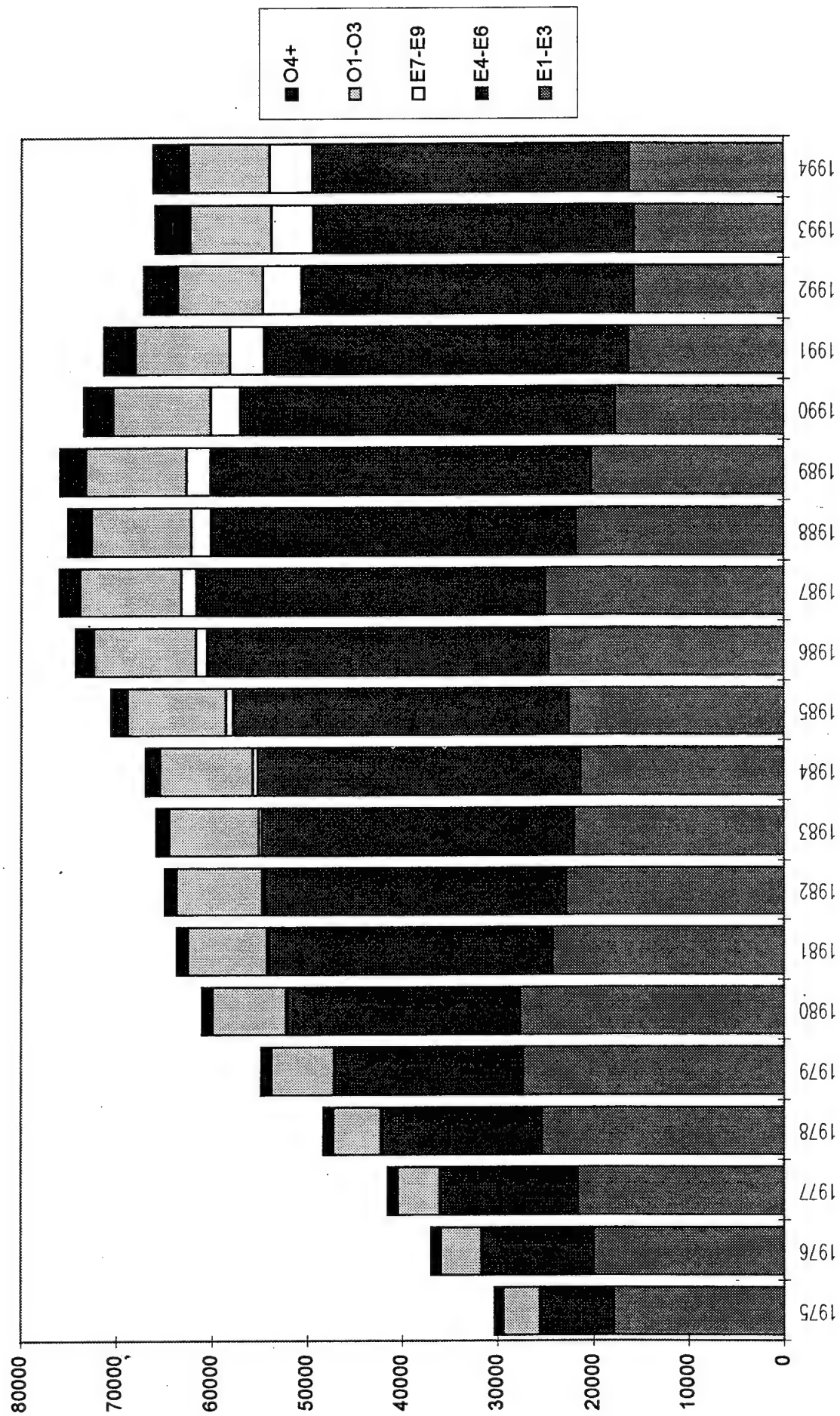


Table 4. Distribution of Active Duty Air Force (ADAF) Women by Marital Status, 1975-1994

	Total N	Non-Married		Married	
		N	%	N	%
1975	30335	17999	59.3	12336	40.7
1976	36960	22085	59.8	14875	40.2
1977	41521	23165	55.8	18356	44.2
1978	48295	26511	54.9	21784	45.1
1979	54822	29675	54.1	25147	45.9
1975-1979	211933	119435	56.4	92498	43.6
1980	61039	32694	53.6	28345	46.4
1981	63672	32544	51.1	31128	48.9
1982	64924	32290	49.7	32634	50.3
1983	65827	32322	49.1	33505	50.9
1984	66970	33367	49.8	33603	50.2
1980-1984	322432	163217	50.6	159215	49.4
1985	70546	36254	51.4	34292	48.6
1986	74289	38373	51.7	35916	48.3
1987	76003	38883	51.2	37120	48.8
1988	75079	37590	50.1	37489	49.9
1989	75950	37100	48.8	38850	51.2
1985-1989	371867	188200	50.6	183667	49.4
1990	73437	34959	47.6	38478	52.4
1991	71326	32850	46.1	38476	53.9
1992	67137	30746	45.8	36391	54.2
1993	65934	29231	44.3	36703	55.7
1994	66168	29158	44.1	37010	55.9
1990-1994	344002	156944	45.6	187058	54.4
1975-1994	1250234	627796	50.2	622438	49.8

Figure 4. Number of ADAF Women by Marital Status, 1975-1994

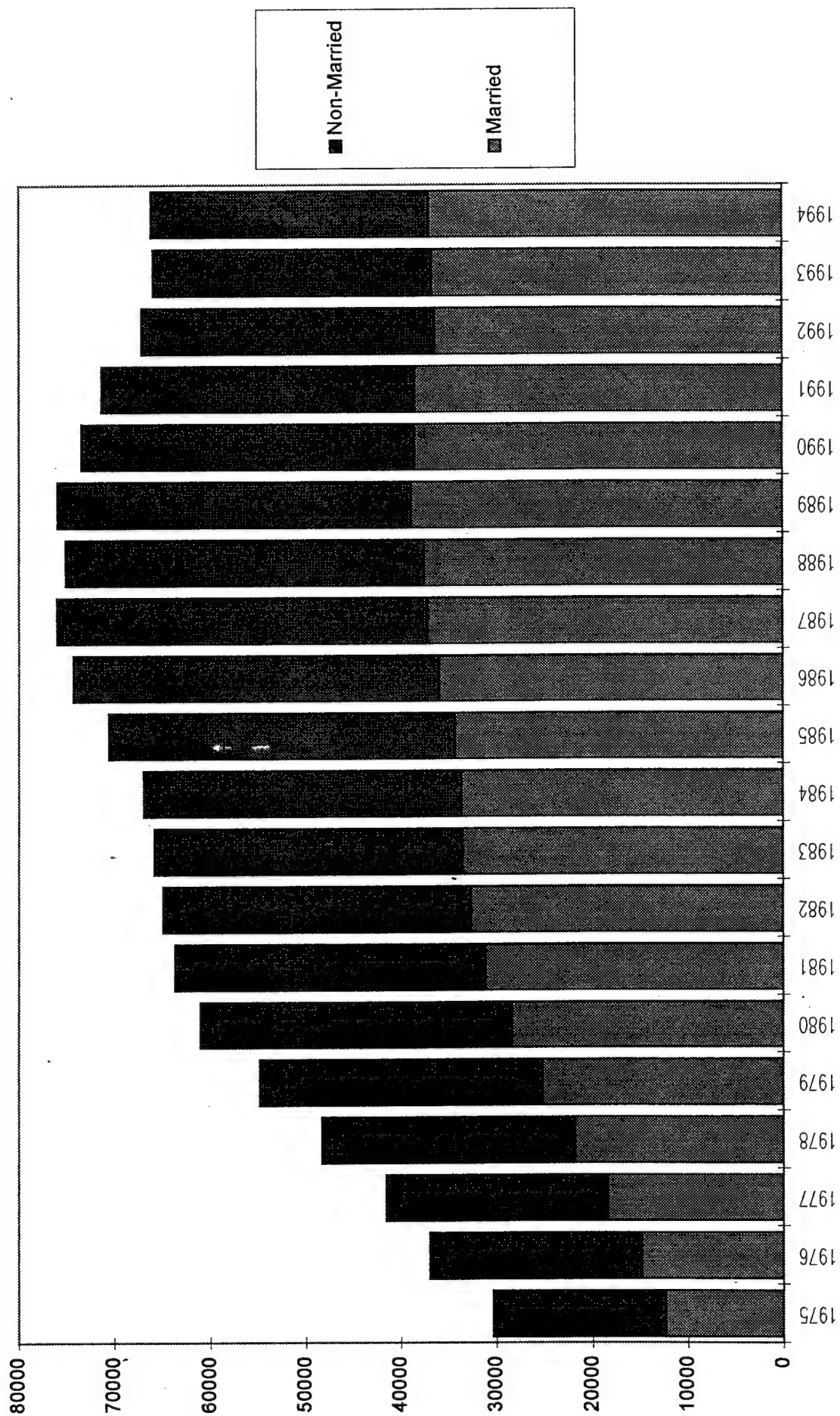


Table 5. Distribution of Active Duty Air Force (ADAF) Enlisted Women by Job Group, 1975-1994

	Total Enlisted		Tactical Ops		Electr/Comm/Intell		Health Care		Function Support/Admin		Repair/Craftsmn		Services/Supply		Other	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1975	25543		358	1.4	1203	4.7	2926	11.5	1027	4.0	394	1.5	7996	31.3	11639	45.6
1976	31634		485	1.5	2130	6.7	4348	13.7	1371	4.3	706	2.2	11807	37.3	10788	34.1
1977	36035		1587	4.4	2606	7.2	4677	13.0	1533	4.3	1032	2.9	12200	33.9	12400	34.4
1978	42218		1550	3.7	3162	7.5	5429	12.9	2016	4.8	1564	3.7	14363	34.0	14134	33.5
1979	47256		1940	4.1	3702	7.8	5988	12.7	2307	4.9	2050	4.3	15632	33.1	15638	33.1
1975-1979	182886		5919	3.2	12803	7.0	23369	12.8	8254	4.5	5747	3.1	61997	33.9	64598	35.4
1980	52308		2272	4.3	4538	8.7	8654	12.7	2567	4.9	2393	4.6	18205	34.8	15679	30.0
1981	54335		2819	5.2	4694	8.6	6944	12.8	2779	5.1	2862	5.3	19136	35.2	15100	27.8
1982	54879		2861	5.2	4820	8.8	7219	13.2	2993	5.5	2883	5.3	19925	36.3	14178	25.8
1983	55132		2730	5.0	4573	8.3	7594	13.8	3238	5.9	2766	5.0	20762	37.7	13470	24.4
1984	55804		2386	4.3	4552	8.2	7774	13.9	3526	6.3	2603	4.7	21214	38.0	13749	24.6
1980-1984	272458		13068	4.8	23177	8.5	36185	13.3	15104	5.5	13507	5.0	99242	36.4	72175	26.5
1985	58574		2938	5.0	4873	8.3	8172	14.0	3874	6.6	5448	9.3	22435	38.3	10828	18.5
1986	61747		3523	5.7	5082	8.2	8503	13.8	4150	6.7	6612	10.7	22686	36.7	11192	18.1
1987	63284		4144	6.5	5235	8.3	8890	14.0	4363	6.9	7540	11.9	23572	37.2	9551	15.1
1988	62243		4343	7.0	5138	8.3	8913	14.3	4923	7.9	12465	20.0	23105	37.1	3354	5.4
1989	62809		4340	6.9	5337	8.5	9274	14.8	4983	7.9	12965	20.6	23411	37.3	2499	4.0
1985-1989	308657		19288	6.2	25665	8.3	43747	14.2	22293	7.2	45030	14.6	115210	37.3	37425	12.1
1990	60239		4143	6.9	5108	8.5	9523	15.8	4957	8.2	11771	19.5	22314	37.0	2423	4.0
1991	58176		4187	7.2	4982	8.6	9575	16.5	4848	8.3	10899	18.7	21397	36.8	2289	3.9
1992	54707		3897	7.1	4796	8.8	9513	17.4	4696	8.6	9726	17.8	21399	39.1	681	1.2
1993	53749		5659	10.5	2388	4.4	9691	18.0	1401	2.6	8854	16.5	24720	46.0	1035	1.9
1994	53946		6078	11.3	2427	4.5	9903	18.4	1388	2.6	8803	16.3	23994	44.5	1353	2.5
1990-1994	280816		23963	8.5	19701	7.0	48204	17.2	17290	6.2	50052	17.8	113824	40.5	7780	2.8
1975-1994	1044618		62238	6.0	81346	7.8	151505	14.5	62940	6.0	114336	10.9	390274	37.4	181979	17.4

Figure 5. Distribution of ADAF Enlisted Women by Job Group, 1975-1994

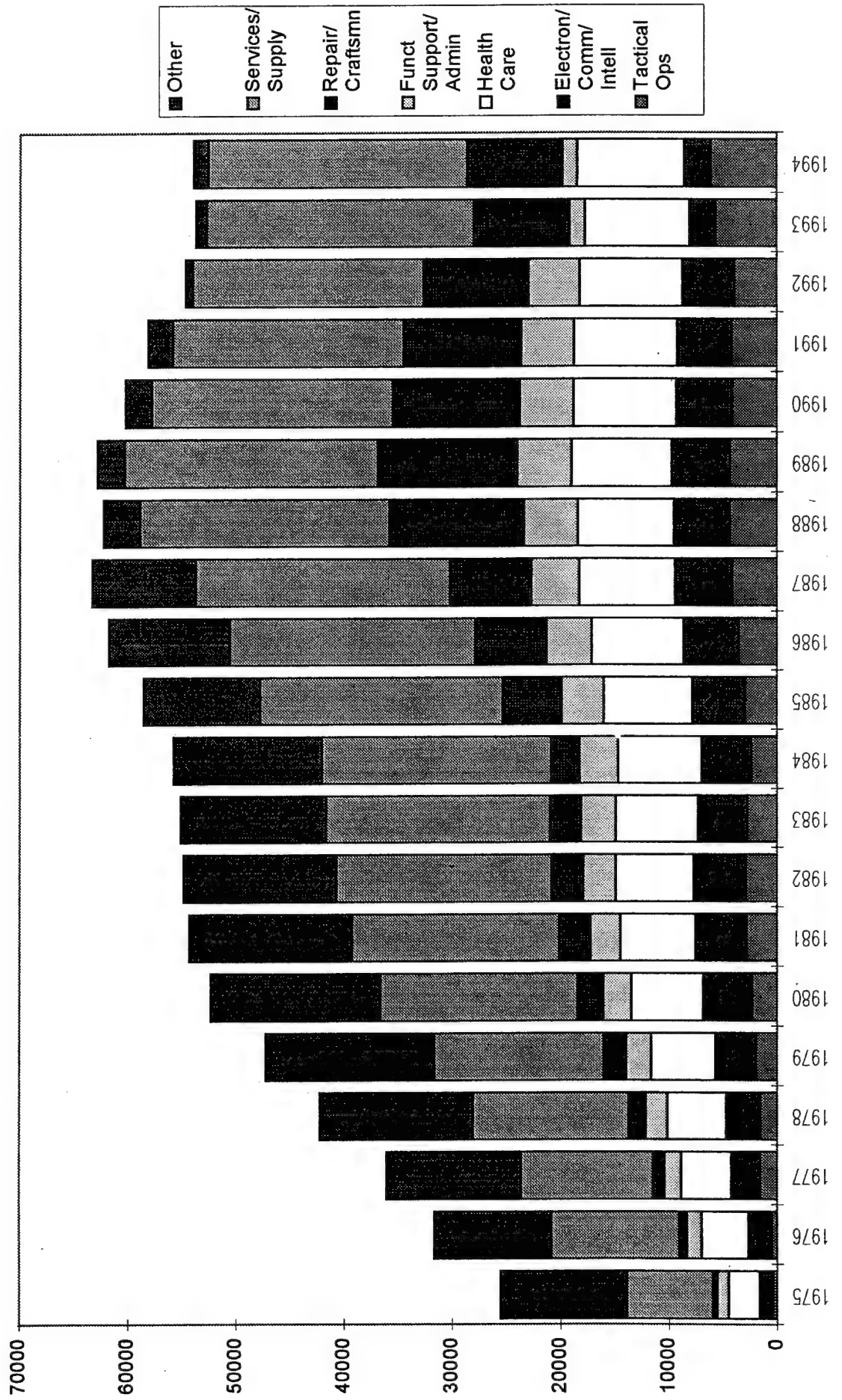


Table 6. Distribution of Active Duty Air Force (ADAF) Women Officers by Job Group, 1975-1994

	Total Officers		Tactical Ops		Intell/Eng/Maint		Scientist/Prof		Health Care		Admin/Exec		Supply/Procmt		Other	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1975	4792		173	3.6	193	4.0	31	0.6	3242	67.6	20	0.4	638	13.3	496	10.3
1976	5326		228	4.3	235	4.4	38	0.7	3514	66.0	33	0.6	813	15.3	465	8.7
1977	5486		298	5.4	275	5.0	44	0.8	3405	62.1	36	0.7	878	16.0	550	10.0
1978	6077		416	6.8	362	6.0	59	1.0	3493	57.5	49	0.8	1038	17.1	660	10.9
1979	7566		611	8.1	600	7.9	100	1.3	3553	47.0	103	1.4	1663	22.0	937	12.4
1975-1979	29247		1726	5.9	1665	5.7	270	0.9	17206	58.8	241	0.8	5031	17.2	3108	10.6
1980	8731		730	8.4	714	8.2	136	1.6	3849	44.1	153	1.8	2030	23.3	1120	12.8
1981	9337		873	9.3	822	8.8	165	1.8	3993	42.8	188	2.0	2096	22.4	1201	12.9
1982	10045		998	9.9	941	9.4	207	2.1	4212	41.9	216	2.2	2176	21.7	1294	12.9
1983	10695		1090	10.2	1069	10.0	273	2.6	4374	40.9	262	2.5	2231	20.9	1395	13.0
1984	11166		1142	10.2	1141	10.2	307	2.7	4540	40.7	304	2.7	2225	19.9	1506	13.5
1980-1984	49974		4832	9.7	4687	9.4	1089	2.2	20968	42.0	1124	2.2	10758	21.5	6516	13.0
1985	11972		1220	10.2	2281	19.1	333	2.8	4809	40.2	336	2.8	2383	19.9	611	5.1
1986	12542		1317	10.5	2350	18.7	370	3.0	5082	40.5	361	2.9	2498	19.9	564	4.5
1987	12719		1421	11.2	2359	18.5	381	3.0	5192	40.8	365	2.9	2450	19.3	552	4.3
1988	12836		1468	11.4	2373	18.5	406	3.2	5322	41.5	388	3.0	2358	18.4	520	4.1
1989	13141		1497	11.4	2398	18.2	441	3.4	5527	42.1	410	3.1	2360	18.0	508	3.9
1985-1989	63210		6923	11.0	11761	18.6	1931	3.1	25932	41.0	1859	2.9	12049	19.1	2754	4.4
1990	13198		1539	11.7	2283	17.3	453	3.4	5689	43.1	425	3.2	2318	17.6	493	3.7
1991	13150		1564	11.9	2277	17.3	468	3.6	5680	43.2	433	3.3	2305	17.5	424	3.2
1992	12430		1473	11.8	2251	18.1	474	3.8	5494	44.2	463	3.7	2261	18.2	15	0.1
1993	12185		1410	11.6	1517	12.4	806	6.6	5500	45.1	74	0.6	1917	15.7	961	7.9
1994	12222		1407	11.5	1492	12.2	825	6.8	5557	45.5	83	0.7	1950	16.0	908	7.4
1990-1994	63186		7393	11.7	9819	15.5	3026	4.8	27920	44.2	1478	2.3	10751	17.0	2801	4.4
1975-1994	205616		20874	10.2	27931	13.6	6316	3.1	92027	44.8	4701	2.3	38589	18.8	15179	7.4

Figure 6. Distribution of ADAF Women Officers by Job Group, 1975-1994

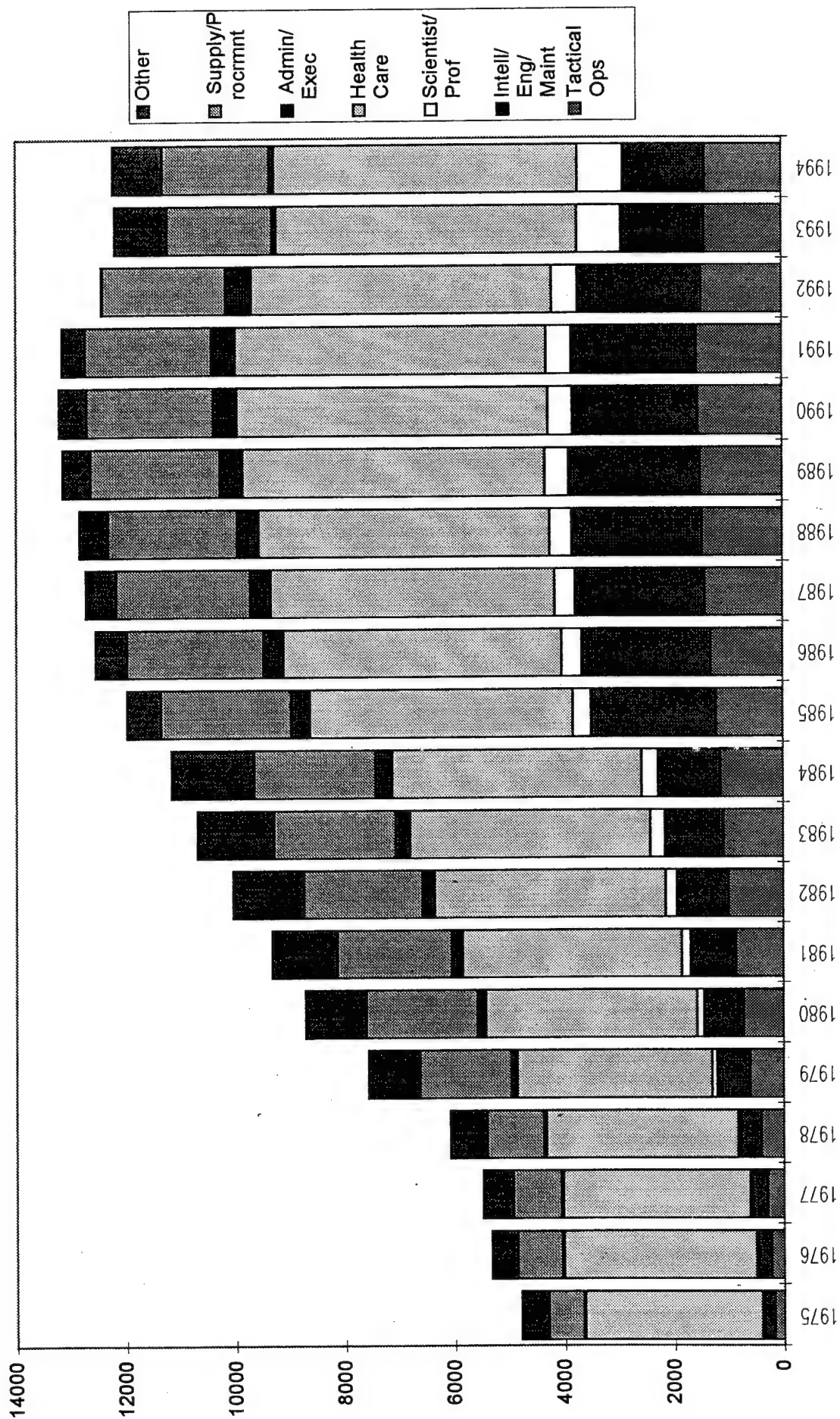


Table 7. Distribution of Active Duty Air Force (ADAF) Women by Major Command Function, 1975-1994

	Total N	Training		Operations		Logistics		Other	
		N	%	N	%	N	%	N	%
1975	30335	6818	22	17881	59	2122	7	3515	12
1976	36960	8516	23	21948	59	2514	7	3982	11
1977	41521	8944	22	25423	61	2633	6	4521	11
1978	48295	9416	19	28728	59	3331	7	6820	14
1979	54822	10900	20	33841	62	3924	7	6157	11
1975-1979	211933	44594	21	127822	60	14524	7	24994	12
1980	61039	11697	19	37895	62	4364	7	7083	12
1981	63672	10875	17	41414	65	4579	7	6803	11
1982	64924	10436	16	42761	66	4905	8	6822	11
1983	65827	10036	15	43941	67	5250	8	6601	10
1984	66970	10336	15	43861	65	5587	8	7186	11
1980-1984	322432	53380	17	209872	65	24685	8	34496	11
1985	70546	11949	17	45171	64	5901	8	7525	11
1986	74289	11710	16	48373	65	6062	8	8143	11
1987	76003	11660	15	49601	65	4973	7	9769	13
1988	75079	10534	14	49844	66	5001	7	9700	13
1989	75950	10931	14	49975	66	5201	7	9843	13
1985-1989	371867	56784	15	242965	65	27139	7	44980	12
1990	73437	10158	14	51060	70	5246	7	6972	9
1991	71326	10286	14	50929	71	5232	7	4879	7
1992	67137	10876	16	44404	66	5224	8	6632	10
1993	65934	12166	18	41014	62	5904	9	6849	10
1994	66168	13058		33800	51	6302	10	13007	20
1990-1994	344002	56545	16	221208	64	27909	8	38340	11
1975-1994	1250234	211302	17	801866	64	94256	8	142810	11

Figure 7. Distribution of ADAF Women by Major Command Function, 1975-1994

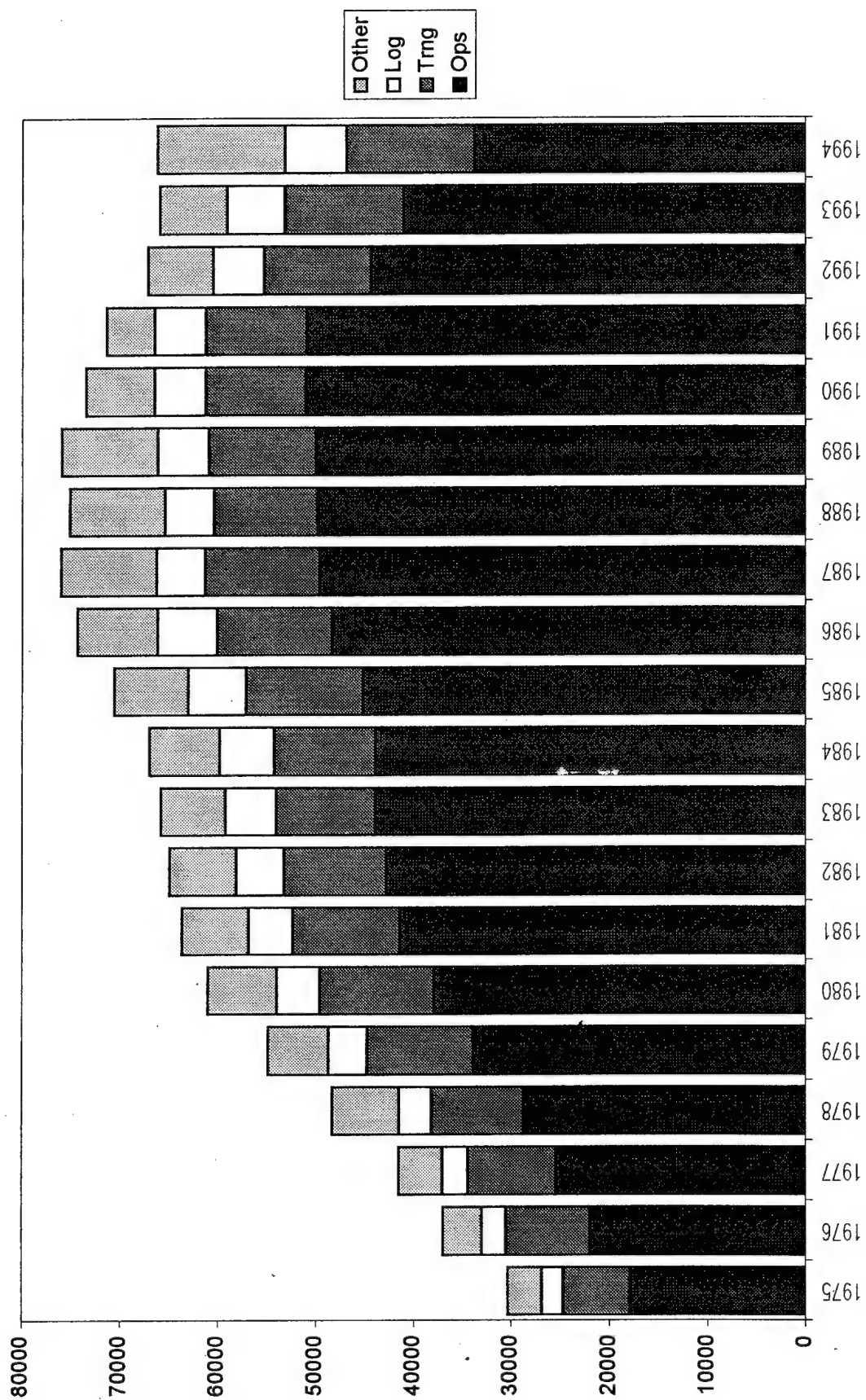


Table 8. Distribution of Active Duty Air Force (ADAF) Women by Geographical Region, 1975-1994

	Total N	Pacific		Europe		United States	
		N	%	N	%	N	%
1975	30335	1263	4.2	2243	7.4	26829	88.4
1976	36960	1397	3.8	3124	8.5	32439	87.8
1977	41521	1541	3.7	3483	8.4	36497	87.9
1978	48295	1934	4.0	3970	8.2	42391	87.8
1979	54822	2359	4.3	4919	9.0	47544	86.7
1975-1979	211933	8495	4.0	17738	8.4	185700	87.6
1980	61039	2678	4.4	5771	9.5	52591	86.2
1981	63672	2928	4.6	6525	10.2	54219	85.2
1982	64924	2969	4.6	6915	10.7	55040	84.8
1983	65827	2919	4.4	7094	10.8	55813	84.8
1984	66970	2850	4.3	7101	10.6	57018	85.1
1980-1984	322432	14345	4.4	33406	10.4	274681	85.2
1985	70546	3065	4.3	7660	10.9	59822	84.8
1986	74289	3323	4.5	8091	10.9	62875	84.6
1987	76003	3435	4.5	8579	11.3	63989	84.2
1988	75079	3449	4.6	8486	11.3	63143	84.1
1989	75950	3632	4.8	8371	11.0	63947	84.2
1985-1989	371867	16904	4.5	41187	11.1	313776	84.4
1990	73437	5072	6.9	9062	12.3	59303	80.8
1991	71326	4829	6.8	8000	11.2	58496	82.0
1992	67137	5006	7.5	7091	10.6	55040	82.0
1993	65934	5126	7.8	6019	9.1	54789	83.1
1994	66168	5180	7.8	4912	7.4	56076	84.7
1990-1994	344002	25212	7.3	35086	10.2	283704	82.5
1975-1994	1250234	64956	5.2	127417	10.2	1057861	84.6

Figure 8. Distribution of ADAF Women by Geographical Region, 1975-1994

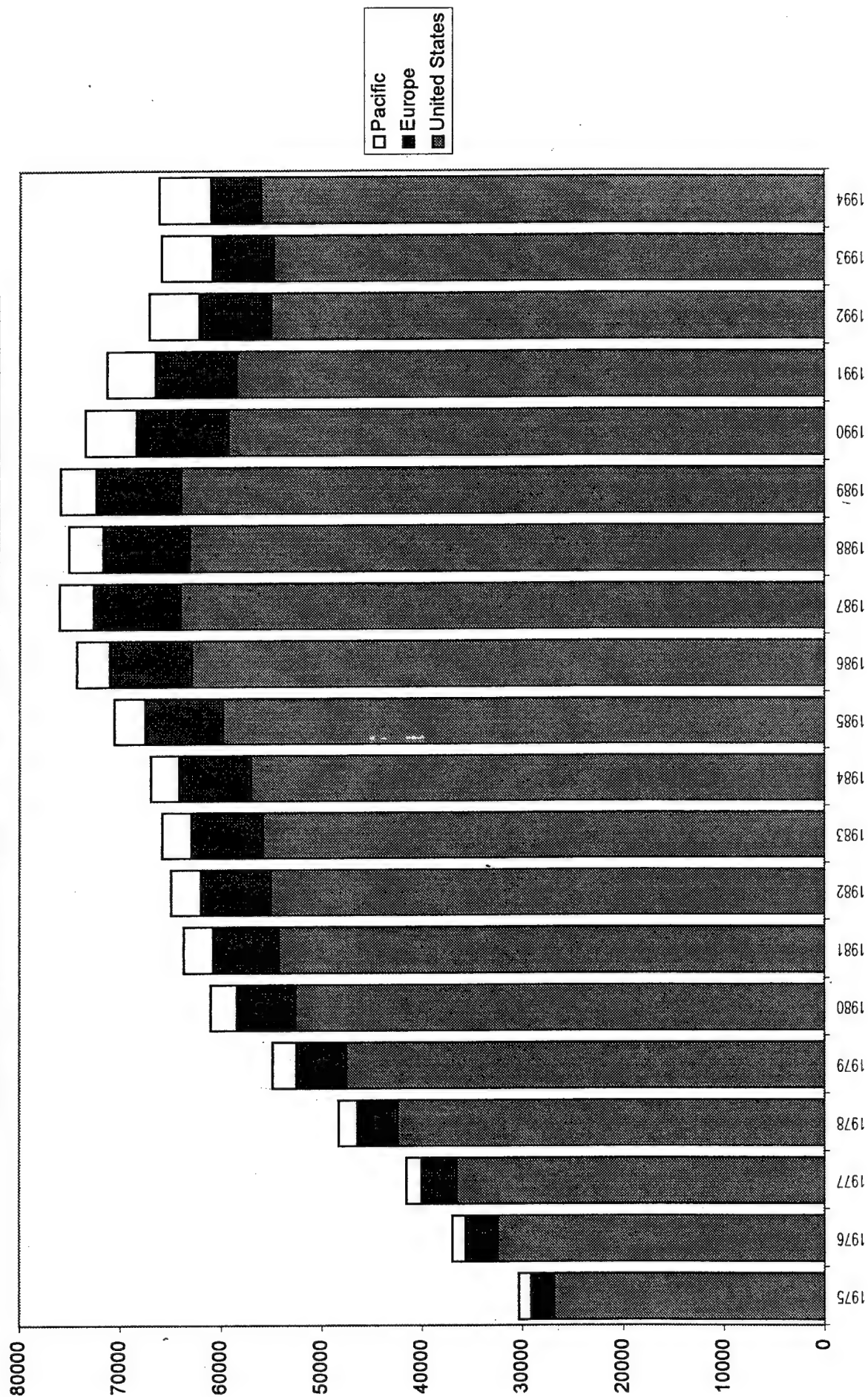


Table 9. Alternative Methods for Counting Birth Events

Note: V27 codes were not in use until 1980

Year	Newborn Records	V27 Codes	Presentation of Fetus		V27 & Presentation of Fetus	
			Codes	Codes	Codes	Codes
1975	1011	0	1135	1135	1135	1135
1976	1720	0	1908	1908	1908	1908
1977	2053	0	2152	2152	2152	2152
1978	2349	0	2546	2546	2546	2546
1979	2781	0	3151	3151	3151	3151
1980	3423	3967	3796	3796	4324	4324
1981	4027	4689	4420	4420	5093	5093
1982	4555	5202	4750	4750	5544	5544
1983	4579	4945	4546	4546	5292	5292
1984	4624	4619	4397	4397	5067	5067
1985	4698	4636	4502	4502	5162	5162
1986	4710	4565	4569	4569	5189	5189
1987	5031	4824	4963	4963	5574	5574
1988	4882	4678	4767	4767	5441	5441
1989	3522	4384	4676	4676	5310	5310
1990	4959	4272	4701	4701	5379	5379
1991	4569	3918	4571	4571	5096	5096
1992	4412	3648	4198	4198	4767	4767
1993	4354	3270	4026	4026	4549	4549
1994	3683	2798	3532	3532	4061	4061
1975-1994	75942	64415	77306	77306	86740	86740

Figure 9. Alternative Methods for Counting Birth Events

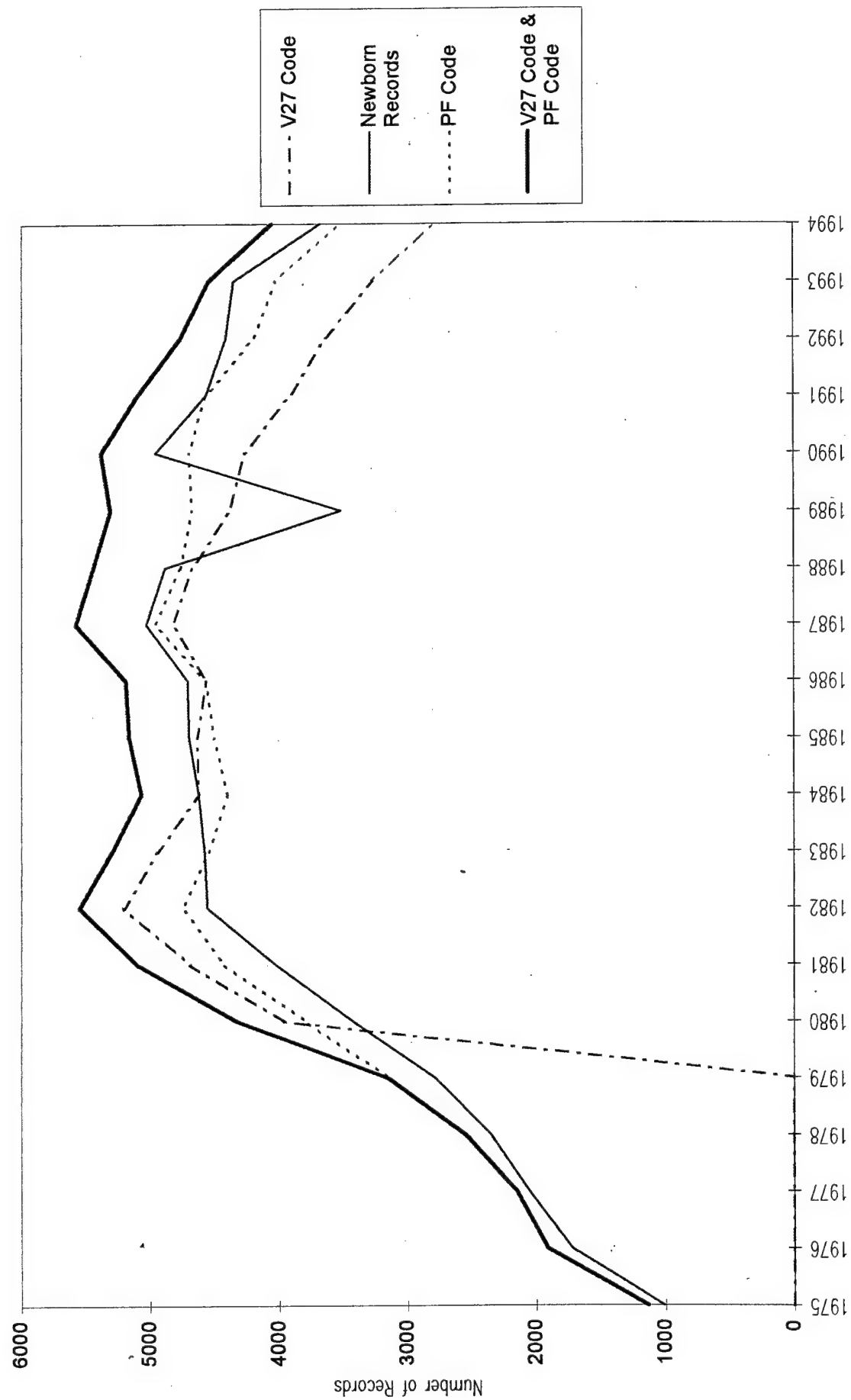


Table 10. Distribution of Birth Outcomes by Type of Pregnancy, 1975-1994
The % columns reflect either percentage of liveborn or percentage of stillborn fetuses that were singletons, twins or triplets

	Total		Singleton Pregnancies				Twin Pregnancies				Triplet Pregnancies			
	Liveborn Stillborn		Liveborn		Stillborn		Liveborn		Stillborn		Liveborn		Stillborn	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
1975	1133	13	1113	98.2	11	84.6	20	1.8	2	15.4	0	0.0	0	0.0
1976	1911	14	1883	98.5	11	78.6	25	1.3	3	21.4	3	0.2	3	0.2
1977	2162	12	2121	98.1	12	100.0	38	1.8	0	0.0	3	0.1	3	0.1
1978	2555	11	2523	98.7	9	81.8	32	1.3	2	18.2	0	0.0	0	0.0
1979	3150	28	3102	98.5	24	85.7	48	1.5	4	14.3	0	0.0	0	0.0
1975-1979	10911	78	10742	98.5	67	85.9	163	1.5	11	14.1	6	0.1	6	0.1
1980	4353	32	4231	97.2	30	93.8	122	2.8	2	6.3	0	0.0	0	0.0
1981	5081	52	5004	98.5	47	90.4	77	1.5	5	9.6	0	0.0	0	0.0
1982	5562	41	5457	98.1	32	78.0	105	1.9	9	22.0	0	0.0	0	0.0
1983	5295	40	5213	98.5	36	90.0	82	1.5	4	10.0	0	0.0	0	0.0
1984	5098	35	4969	97.5	33	94.3	126	2.5	2	5.7	3	0.1	3	0.1
1980-1984	25389	200	24874	98.0	178	89.0	512	2.0	22	11.0	3	0.0	3	0.0
1985	5180	37	5079	98.1	30	81.1	101	1.9	7	18.9	0	0.0	0	0.0
1986	5199	39	5114	98.4	35	89.7	82	1.6	4	10.3	3	0.1	3	0.1
1987	5601	37	5485	97.9	31	83.8	110	2.0	6	16.2	6	0.1	6	0.1
1988	5457	41	5348	98.0	39	95.1	106	1.9	2	4.9	3	0.1	3	0.1
1989	5342	32	5222	97.8	28	87.5	114	2.1	4	12.5	6	0.1	6	0.1
1985-1989	26779	186	26248	98.0	163	87.6	513	1.9	23	12.4	18	0.1	18	0.1
1990	5402	24	5310	98.3	24	100.0	92	1.7	0	0.0	0	0.0	0	0.0
1991	5112	29	5026	98.3	27	93.1	86	1.7	2	6.9	0	0.0	0	0.0
1992	4798	22	4697	97.9	19	86.4	95	2.0	3	13.6	6	0.1	6	0.1
1993	4557	18	4507	98.9	16	88.9	50	1.1	2	11.1	0	0.0	0	0.0
1994	4066	28	3996	98.3	26	92.9	70	1.7	2	7.1	0	0.0	0	0.0
1990-1994	23935	121	23536	98.3	112	92.6	393	1.6	9	7.4	6	0.0	6	0.0
1975-1994	87014	585	85400	98.1	520	88.9	1581	1.8	65	11.1	33	0.0	33	0.0

Table 11a. Distribution of Mother's Age at Parturition for Live Births, 1975-1994
 Note: The unit of analysis in this table is the number of mothers, not the number of live births

	Mother Age							
	Total	17-19	20-24	25-29	30-34	35-39	40-44	45+
1975	1124	138	772	195	14	5	0	0
1976	1897	194	1253	389	48	13	0	0
1977	2141	166	1400	502	64	8	1	0
1978	2539	224	1540	674	92	8	1	0
1979	3127	258	1842	877	134	15	1	0
1975-1979	10828	980	6807	2637	352	49	3	0
1980	4293	326	2565	1197	176	24	5	0
1981	5043	410	2806	1503	301	22	0	1
1982	5511	331	3121	1647	369	42	1	0
1983	5255	202	2929	1606	468	45	5	0
1984	5034	174	2575	1703	517	60	4	1
1980-1984	25136	1443	13996	7656	1831	193	15	2
1985	5130	154	2479	1792	603	98	4	0
1986	5157	172	2307	1923	644	106	4	1
1987	5543	198	2484	2005	715	130	10	1
1988	5403	198	2391	1898	744	161	11	0
1989	5282	203	2353	1773	756	183	14	0
1985-1989	26515	925	12014	9391	3462	678	43	2
1990	5356	188	2292	1852	805	207	11	1
1991	5070	141	2120	1752	827	212	17	1
1992	4747	143	1930	1571	833	254	16	0
1993	4532	213	1920	1449	704	233	11	2
1994	4031	172	1697	1242	660	233	27	0
1990-1994	23736	857	9959	7866	3829	1139	82	4
1975-1994	86215	4205	42776	27550	9474	2059	143	8

Table 11b. Distribution of Mother's Age at Parturition for Stillbirths, 1975-1994

Note: The unit of analysis in this table is the number of mothers, not the number of stillbirths

	Mother Age							
	Total	17-19	20-24	25-29	30-34	35-39	40-44	45+
1975	13	4	7	2	0	0	0	0
1976	13	0	10	2	0	1	0	0
1977	12	1	7	3	0	1	0	0
1978	10	0	8	2	0	0	0	0
1979	27	1	16	10	0	0	0	0
1975-1979	75	6	48	19	0	2	0	0
1980	32	3	16	12	1	0	0	0
1981	50	7	25	16	2	0	0	0
1982	38	3	24	10	1	0	0	0
1983	39	2	21	11	3	2	0	0
1984	35	3	14	14	4	0	0	0
1980-1984	194	18	100	63	11	2	0	0
1985	34	1	14	13	5	1	0	0
1986	38	2	17	10	8	1	0	0
1987	35	0	12	17	5	1	0	0
1988	41	3	21	12	5	0	0	0
1989	31	2	14	8	4	3	0	0
1985-1989	179	8	78	60	27	6	0	0
1990	24	2	5	10	5	2	0	0
1991	29	3	8	8	8	0	2	0
1992	21	1	8	6	6	0	0	0
1993	17	0	9	5	1	1	1	0
1994	27	2	10	9	6	0	0	0
1990-1994	118	8	40	38	26	3	3	0
1975-1994	566	40	266	180	64	13	3	0

Table 12. Birth Outcomes and Mother's Average Age at Parturition, Live Births & Stillbirths, 1975-1994					
	Total		Age at Parturition N = 86740		
	Liveborn	Stillborn	Mean	Median	
1975	1133	13	22.3	22	
1976	1911	14	22.7	22	
1977	2162	12	23.1	22	
1978	2555	11	23.2	23	
1979	3150	28	23.4	23	
1975-1979	10911	78	22.9	22.4	
1980	4353	32	23.4	23	
1981	5081	52	23.7	23	
1982	5562	41	23.9	23	
1983	5295	40	24.3	24	
1984	5098	35	24.7	24	
1980-1984	25389	200	24.0	23.4	
1985	5180	37	25.0	24	
1986	5199	39	25.2	25	
1987	5601	37	25.2	25	
1988	5457	41	25.3	25	
1989	5342	32	25.4	25	
1985-1989	26779	186	25.3	24.8	
1990	5402	24	25.6	25	
1991	5112	29	25.9	25	
1992	4798	22	26.1	25	
1993	4557	18	25.7	25	
1994	4066	28	25.9	25	
1990-1994	23935	121	25.8	25.0	
1975-1994	87014	585	24.8	24.0	

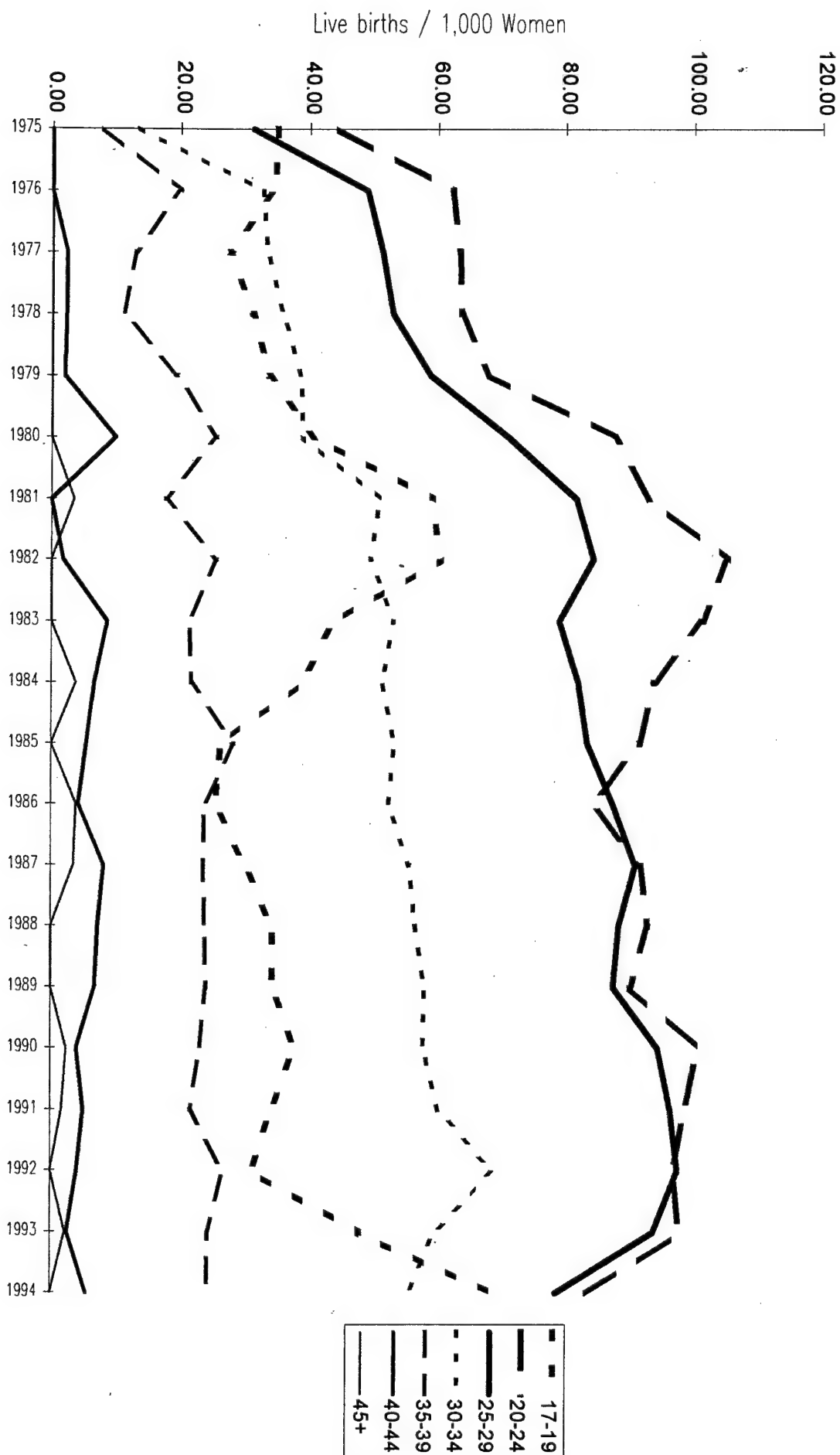
Table 13. Family Member Prefix as Surrogate for Parity, 1975-1994
Family Member Prefix is taken from the newborn record

	Total N	FMP 1		FMP 2		FMP 3		FMP 4+ and other FMP codes		Missing	
		N	%	N	%	N	%	N	%	N	%
1975	1011	868	85.9	102	10.1	15	1.5	4	0.4	22	2.2
1976	1720	1434	83.4	210	12.2	40	2.3	4	0.2	32	1.9
1977	2053	1580	77.0	327	15.9	62	3.0	15	0.7	69	3.4
1978	2349	1730	73.6	424	18.1	81	3.4	22	0.9	92	3.9
1979	2781	1967	70.7	548	19.7	117	4.2	24	0.9	125	4.5
1975-1979	9914	7579	76.4	1611	16.2	315	3.2	69	0.7	340	3.4
1980	3423	2443	71.4	761	22.2	176	5.1	42	1.2	1	0.0
1981	4027	2782	69.1	990	24.6	203	5.0	50	1.2	2	0.0
1982	4555	3144	69.0	1107	24.3	248	5.4	52	1.1	4	0.1
1983	4579	3044	66.5	1217	26.6	250	5.5	66	1.4	2	0.0
1984	4624	3044	65.8	1236	26.7	277	6.0	64	1.4	3	0.1
1980-1984	21208	14457	68.2	5311	25.0	1154	5.4	274	1.3	12	0.1
1985	4698	3022	64.3	1284	27.3	281	6.0	86	1.8	25	0.5
1986	4710	2967	63.0	1282	27.2	281	6.0	98	2.1	82	1.7
1987	5031	3188	63.4	1369	27.2	322	6.4	89	1.8	63	1.3
1988	4882	3043	62.3	1288	26.4	343	7.0	106	2.2	102	2.1
1989	3522	2116	60.1	934	26.5	272	7.7	193	5.5	7	0.2
1985-1989	22843	14336	62.8	6157	27.0	1499	6.6	572	2.5	279	1.2
1990	4959	2895	58.4	1365	27.5	346	7.0	353	7.1	0	0.0
1991	4569	2624	57.4	1277	27.9	333	7.3	335	7.3	0	0.0
1992	4412	2454	55.6	1354	30.7	338	7.7	265	6.0	1	0.0
1993	4354	2573	59.1	1253	28.8	316	7.3	211	4.8	1	0.0
1994	3683	2099	57.0	1102	29.9	289	7.8	193	5.2	0	0.0
1990-1994	21977	12645	57.5	6351	28.9	1622	7.4	1357	6.2	2	0.0
1975-1994	75942	49017	64.5	19430	25.6	4590	6.0	2272	3.0	633	0.8

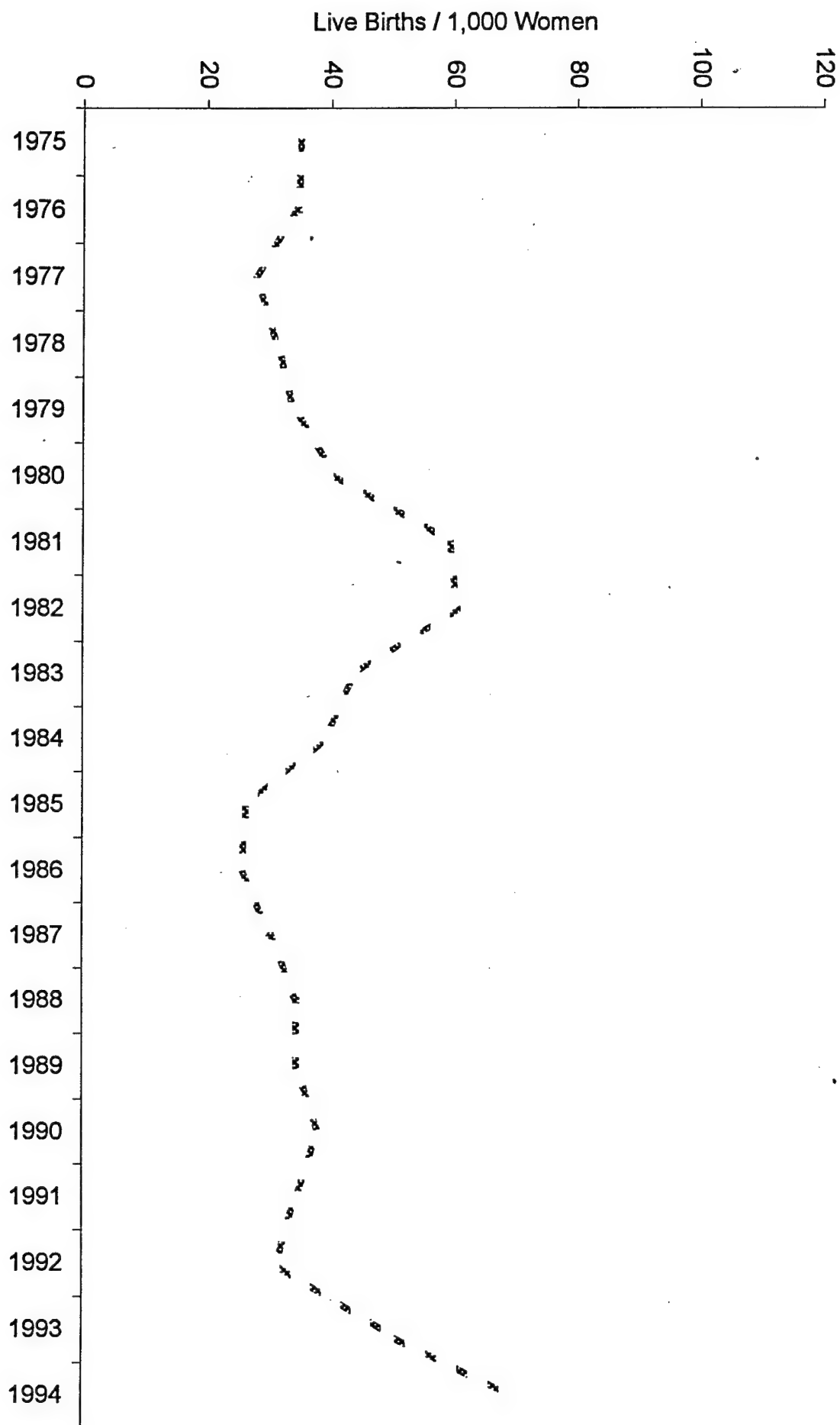
Table 14. Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Women, 1975-1994.

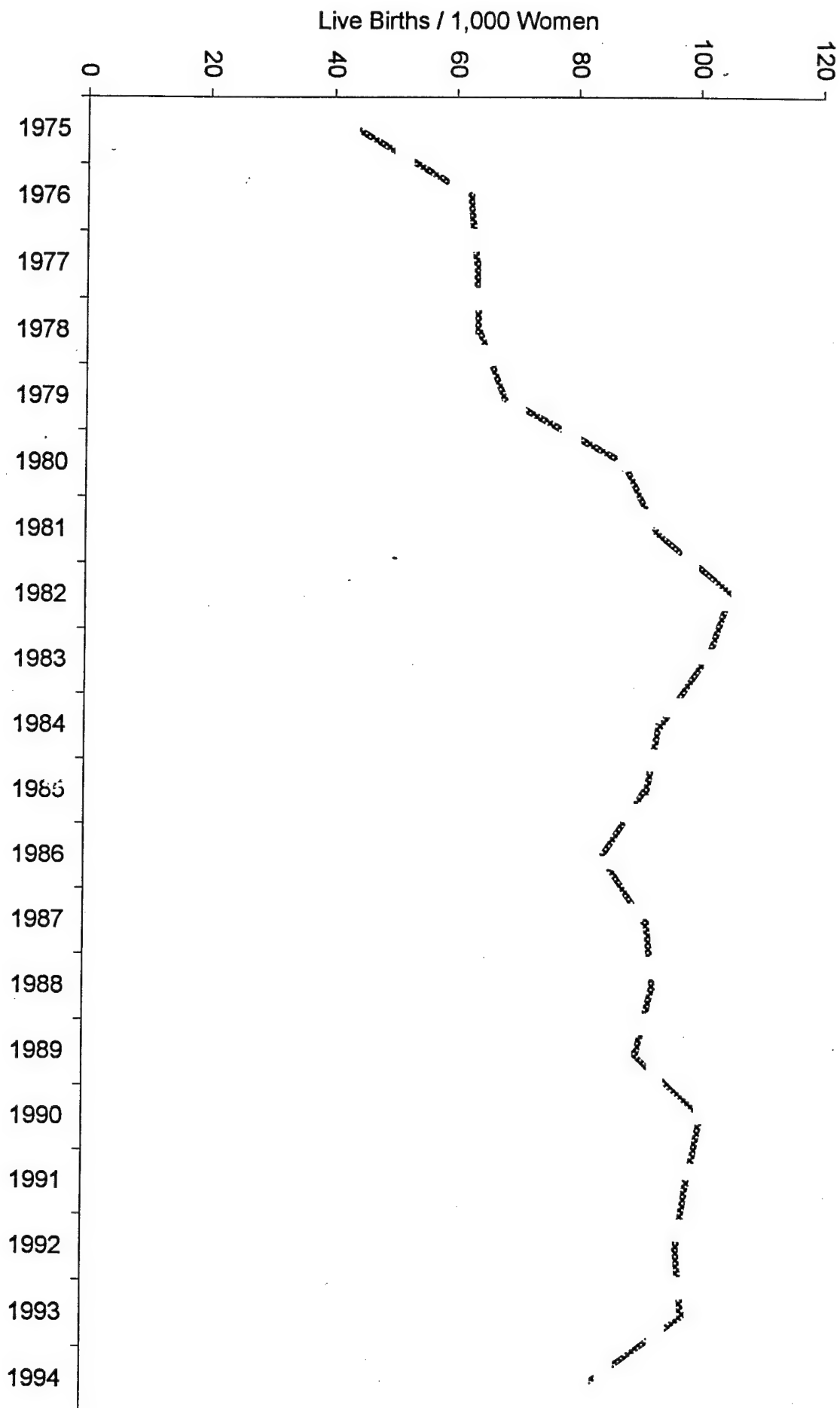
	Total Live Births/1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Births / 1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45+ years
1975	37.3	37.8	589.7	35.0	44.5	31.3	13.4	7.8	0.0	0.0
1976	51.7	52.3	922.9	34.6	62.3	49.0	32.7	19.9	0.0	0.0
1977	52.1	52.4	901.3	27.7	63.4	51.4	33.5	13.0	2.3	0.0
1978	52.9	53.2	924.3	31.3	63.8	53.1	35.9	11.1	2.2	0.0
1979	57.5	57.7	1039.7	33.9	68.2	59.0	38.8	19.6	2.0	0.0
1975-1979	51.5	51.9	906.9	32.3	61.5	51.2	33.6	14.4	1.3	0.0
1980	71.3	71.6	1291.9	41.0	87.7	71.2	39.1	25.8	10.0	0.0
1981	79.8	80.1	1398.9	59.3	93.4	81.9	51.1	17.8	0.0	3.6
1982	85.7	86.0	1519.0	60.6	105.4	84.6	49.7	25.8	1.9	0.0
1983	80.4	80.7	1455.4	44.2	101.6	79.3	53.4	21.5	8.8	0.0
1984	76.1	76.4	1399.8	39.0	94.1	82.3	51.5	21.9	6.8	3.8
1980-1984	78.7	79.1	1419.7	49.1	96.5	80.1	50.0	22.4	5.5	1.5
1985	73.4	73.7	1396.2	26.5	91.9	83.7	53.6	28.6	5.5	0.0
1986	70.0	70.2	1343.5	25.7	84.5	87.7	52.6	24.1	4.3	3.9
1987	73.7	74.0	1448.8	30.5	92.1	91.3	56.0	23.8	8.3	3.6
1988	72.7	73.0	1455.0	34.6	93.3	88.7	56.8	24.0	7.3	0.0
1989	70.3	70.7	1443.9	34.5	90.6	87.9	58.4	24.3	6.9	0.0
1985-1989	72.0	72.3	1417.2	30.2	90.4	87.9	55.6	24.6	6.7	1.3
1990	73.6	74.0	1522.7	38.2	101.2	94.9	58.1	23.3	4.1	2.4
1991	71.7	72.2	1521.3	34.5	99.1	96.9	60.6	21.8	5.1	1.8
1992	71.5	72.2	1573.4	31.3	97.3	98.0	69.3	27.1	4.2	0.0
1993	69.1	70.0	1544.1	48.2	98.4	94.3	60.1	24.6	2.6	2.3
1994	61.4	62.5	1453.1	69.1	84.0	79.0	56.0	24.5	5.6	0.0
1990-1994	69.6	70.3	1517.4	41.8	96.1	92.9	60.8	24.3	4.3	1.1
1975-1994	69.6	70.0	589.7	38.0	86.9	81.4	55.0	23.8	4.7	1.0

Figure 14a. Live Births per 1000 ADAF Women
All Ages, 1975-1994



**Figure 14a1. Live Births per 1000 ADAF women,
17-19 years old, 1975-1994**



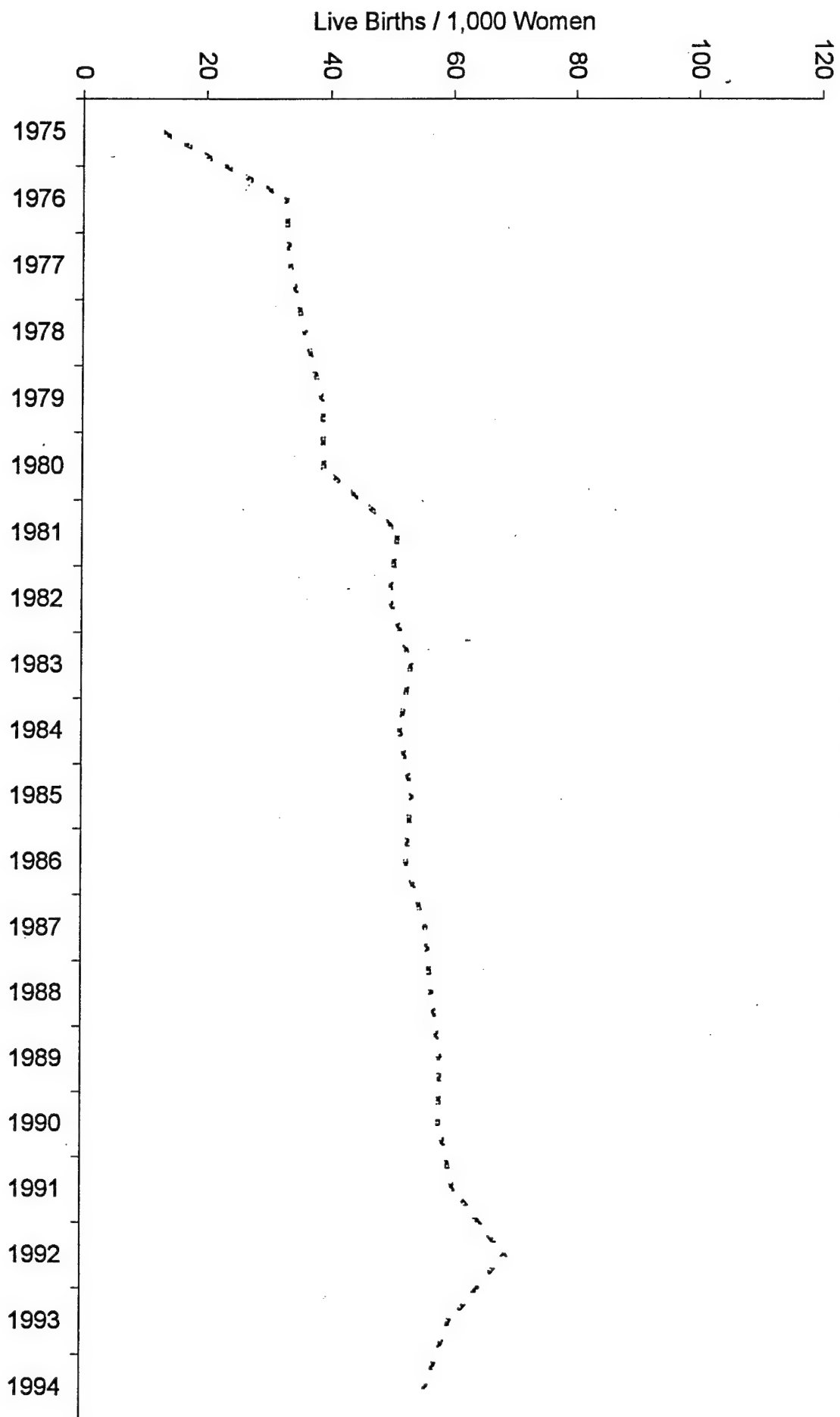


**Figure 14a2. Live Births per 1000 ADAF women,
20-24 years old, 1975-1994**

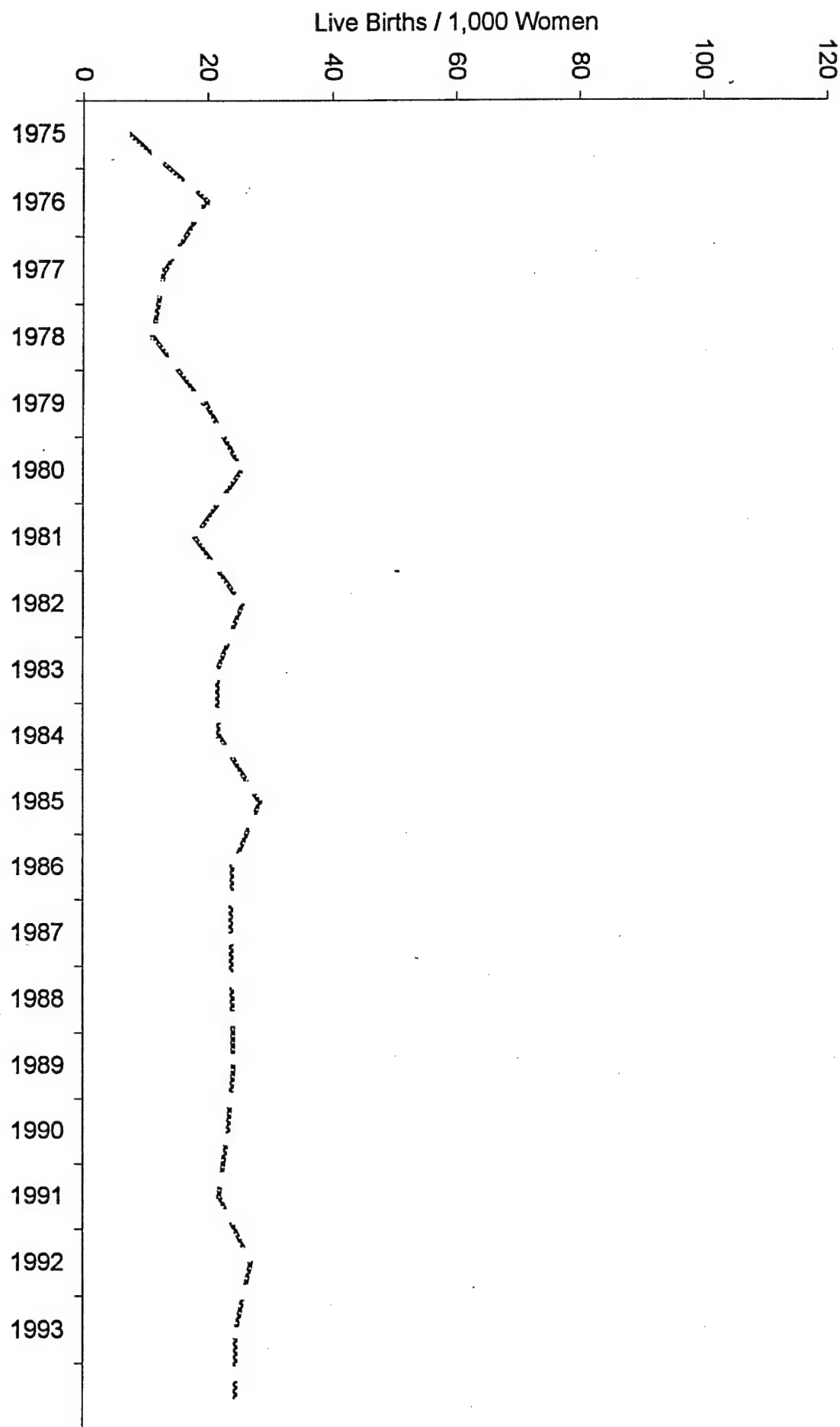


Figure 14a3. Live Births per 1000 ADAF women,
25-29 years old, 1975-1994

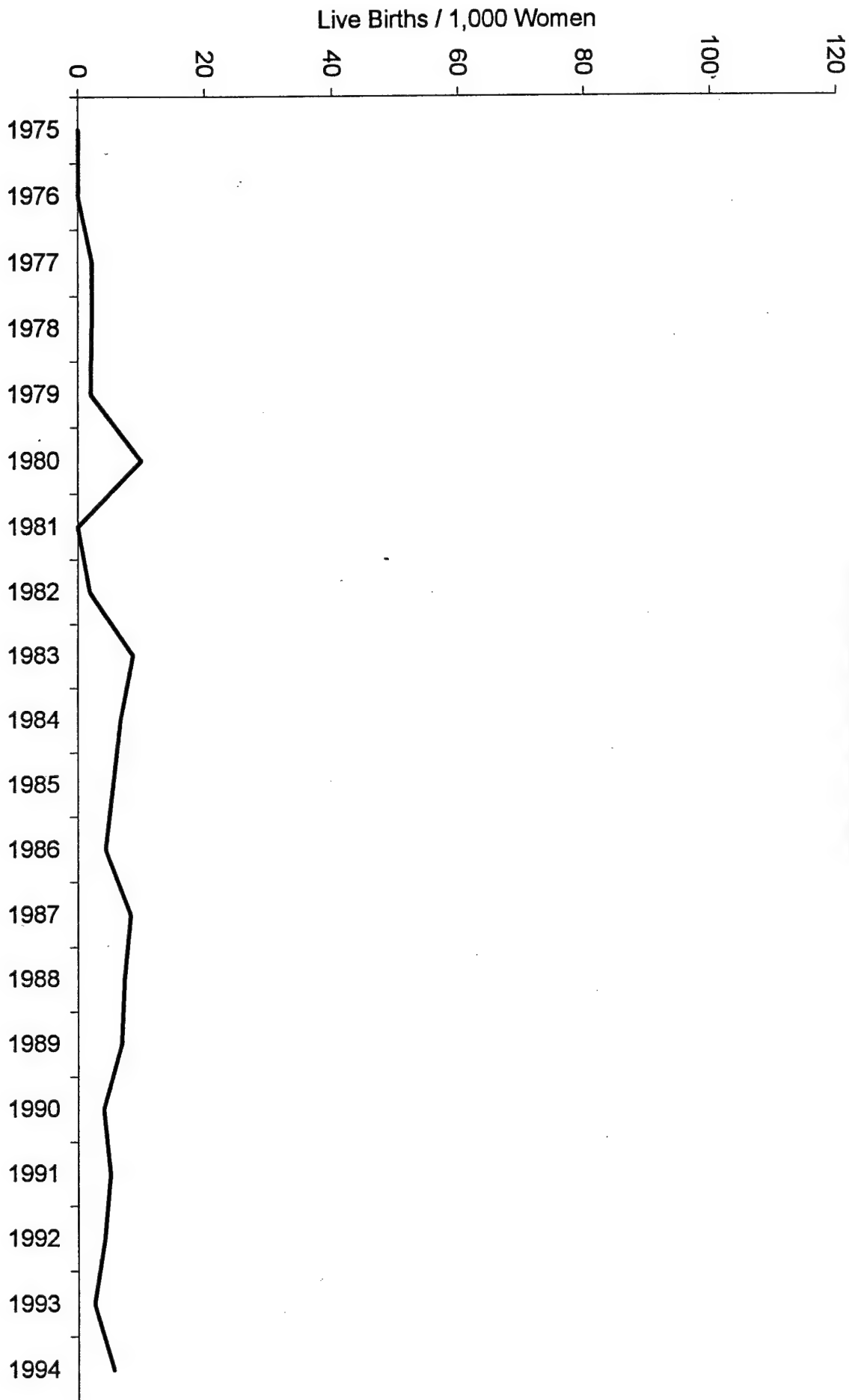
Figure 14a4. Live Births per 1000 ADAF women,
30-34 years old, 1975-1994



**Figure 14a5. Live Births per 1000 ADAF women,
35-39 years old, 1975-1994**



**Figure 14a6. Live Births per 1000 ADAF women,
40-44 years old, 1975-1994**



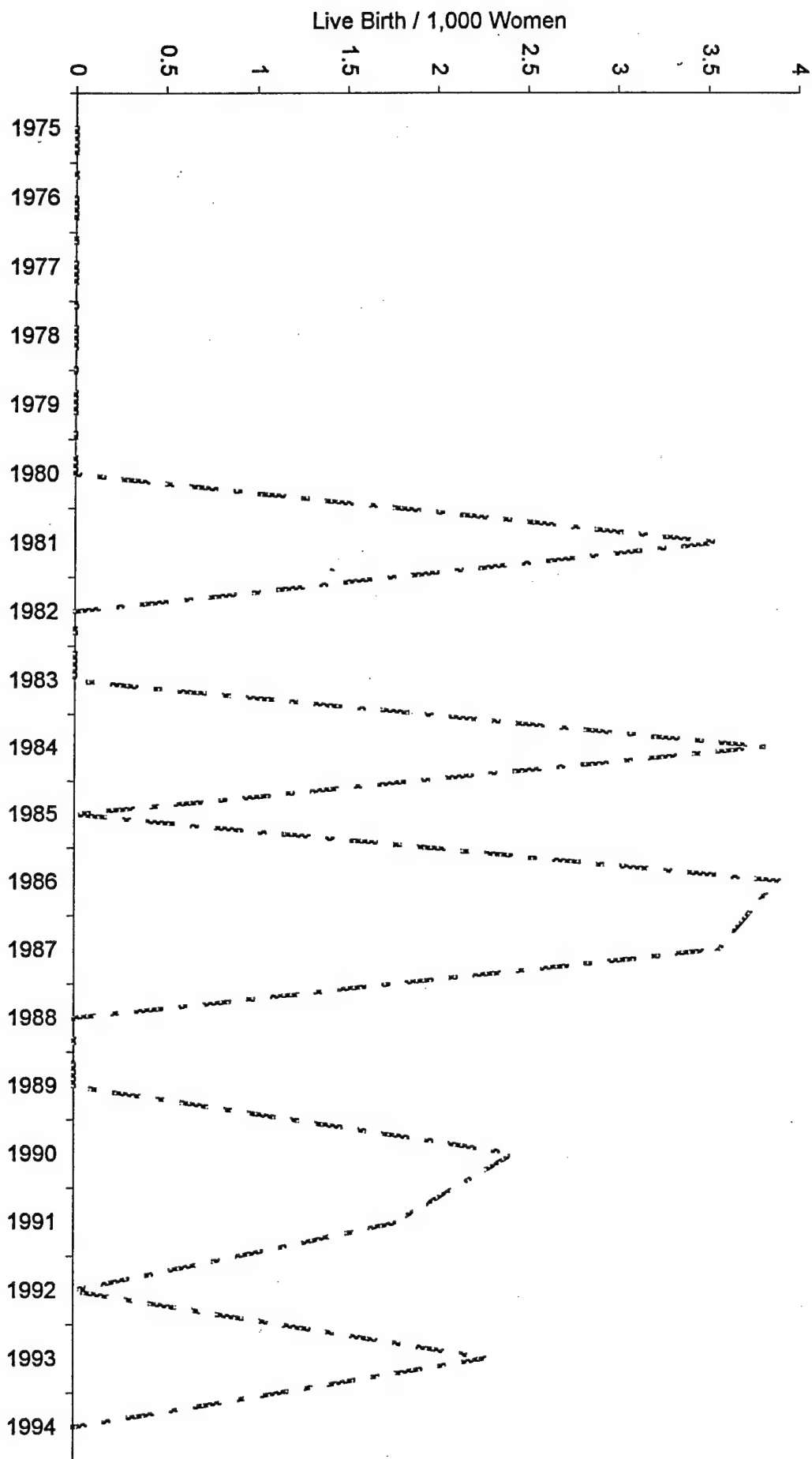


Figure 14a7. Live Births per 1,000 ADAP Women
45+ years old, 1975-1994

Figure 14b. Total Fertility Rate (17-44 years) for ADAF Women, 1975-1994



Table 15. Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Women by Race, 1975-1994

Total Fertility Rate calculated as the sum of the age-specific live births per 1,000 multiplied by the age group interval
Age-Specific Births per 1,000 calculated as the number of live births in an age group per 1,000 ADAF women in that age group.

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000					
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years
1975	37.3	37.8	589.7	35.0	44.5	31.3	13.4	7.8	0.0
White	34.5	35.0	545.2	33.8	41.4	28.7	11.8	6.7	0.0
Black	52.3	52.6	943.7	44.4	58.9	42.8	32.6	27.8	0.0
Other	31.1	31.6	483.8	11.5	36.5	53.3	0.0	0.0	0.0
1976	51.7	52.3	922.9	34.6	62.3	49.0	32.7	19.9	0.0
White	47.9	48.6	893.1	32.8	57.0	47.8	34.0	20.1	0.0
Black	73.0	73.4	1078.2	50.9	88.2	55.6	13.5	27.8	0.0
Other	46.6	47.2	962.6	35.0	56.7	38.0	76.9	0.0	0.0
1977	52.1	52.4	901.3	27.7	63.4	51.4	33.5	13.0	2.3
White	48.4	48.8	875.3	26.2	58.5	49.6	34.0	14.8	2.5
Black	74.2	74.5	1001.9	42.4	91.9	61.6	21.5	0.0	0.0
Other	39.6	39.8	803.2	21.7	47.5	33.5	66.7	0.0	0.0
1978	52.9	53.2	924.3	31.3	63.8	53.1	35.9	11.1	2.2
White	52.2	52.5	922.2	31.3	64.2	50.3	35.8	12.9	2.4
Black	61.0	61.2	973.0	35.6	66.9	67.0	39.3	0.0	0.0
Other	27.9	28.0	483.8	10.6	33.6	32.9	23.8	0.0	0.0
1979	57.5	57.7	1039.7	33.9	68.2	59.0	38.8	19.6	2.0
White	56.8	57.1	1013.4	34.5	69.1	55.6	36.7	18.4	2.3
Black	61.0	65.6	1138.0	34.9	71.0	74.7	44.1	16.9	0.0
Other	31.5	31.7	889.1	13.3	29.4	38.5	64.8	37.0	0.0
1975-1979	51.5	51.9	906.9	32.3	61.5	51.2	33.6	14.4	1.3
White	49.3	49.7	878.5	31.6	59.4	48.5	32.8	14.6	1.4
Black	65.4	65.6	1060.6	40.0	75.3	64.3	35.1	13.4	0.0
Other	34.4	34.6	748.3	17.9	39.1	36.9	51.0	11.9	0.0

Table 15. (cont'd.) Total Live Births per 1,000, Total Fertility Rate and Age-Specific Births per 1,000 ADAF Women by Race, 1975-1994

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000					
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years
1980	71.3	71.6	1291.9	41.0	87.7	71.2	39.1	25.8	10.0
White	71.6	71.9	1273.8	41.2	88.4	71.8	38.1	22.8	9.0
Black	74.0	74.1	1352.0	44.4	90.9	72.0	36.9	44.0	0.0
Other	48.7	49.0	1327.6	17.3	53.2	49.7	76.9	40.8	34.5
1981	79.8	80.1	1398.9	59.3	93.4	81.9	51.1	17.8	0.0
White	78.5	78.9	1368.9	57.3	92.3	80.1	52.5	14.5	0.0
Black	88.4	88.4	1554.8	74.0	103.9	88.3	46.3	28.0	0.0
Other	63.5	63.9	1340.1	39.3	63.7	82.1	50.3	48.4	0.0
1982	85.7	86.0	1519.0	60.6	105.4	84.6	49.7	25.8	1.9
White	86.4	86.8	1527.2	60.3	106.2	86.5	48.1	26.3	2.1
Black	84.9	85.1	1490.1	62.4	105.5	80.6	53.8	20.7	0.0
Other	70.8	71.2	1382.3	59.7	84.8	64.5	61.9	29.4	0.0
1983	80.4	80.7	1455.4	44.2	101.6	79.3	53.4	21.5	8.8
White	81.7	82.0	1479.8	42.9	104.4	79.1	54.1	22.4	10.2
Black	75.1	75.2	1323.8	49.4	88.2	80.2	50.8	16.0	0.0
Other	82.6	83.1	1481.0	47.3	110.9	77.3	54.7	25.0	0.0
1984	76.1	76.4	1399.8	39.0	94.1	82.3	51.5	21.9	6.8
White	76.2	76.6	1409.1	42.0	94.4	81.9	52.0	20.5	7.9
Black	77.2	77.3	1378.6	31.2	96.0	83.7	49.4	27.9	0.0
Other	66.0	66.5	1240.6	16.2	75.7	81.3	56.7	24.7	0.0
1980-1984	78.7	79.1	1419.7	49.1	96.5	80.1	50.0	22.4	5.5
White	60.2	79.3	1235.8	29.7	72.1	69.8	49.1	9.8	28.6
Black	79.9	80.0	1418.1	53.1	96.9	81.1	48.8	24.9	0.0
Other	66.6	67.1	1333.9	33.1	77.4	71.9	58.8	32.4	6.4

Table 15. (cont'd.) Total Live Births per 1,000, Total Fertility Rate and Age-Specific Births per 1,000 ADAF Women by Race, 1975-1994

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000					
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years
1985	73.4	73.7	1396.2	26.5	91.9	83.7	53.6	28.6	5.5
White	74.2	74.5	1409.4	24.2	93.8	84.4	53.8	30.5	4.9
Black	72.8	72.9	1349.9	34.8	88.4	83.6	53.5	23.6	0.0
Other	60.2	60.7	1235.8	29.7	72.1	69.8	49.1	9.8	28.6
1986	70.0	70.2	1343.5	25.7	84.5	87.7	52.6	24.1	4.3
White	70.5	70.8	1370.9	25.2	84.7	88.8	53.6	26.8	5.2
Black	69.1	69.2	1273.5	27.4	85.7	83.8	51.0	17.8	0.0
Other	63.5	64.0	1104.7	26.9	74.3	88.7	41.8	0.0	0.0
1987	73.7	74.0	1448.8	30.5	92.1	91.3	56.0	23.8	8.3
White	74.1	74.4	1463.3	28.4	93.7	91.9	55.9	26.1	8.0
Black	75.2	75.2	1473.9	42.5	94.5	90.7	54.2	17.7	12.3
Other	55.0	55.5	1111.4	14.2	51.7	79.4	70.6	12.1	0.0
1988	72.7	73.0	1455.0	34.6	93.3	88.7	56.8	24.0	7.3
White	74.1	74.4	1478.9	33.0	96.1	90.3	59.7	23.2	6.6
Black	71.1	71.3	1404.4	44.1	92.2	86.8	47.7	23.2	4.5
Other	52.6	53.1	1342.6	21.9	50.6	66.8	56.8	44.1	37.0
1989	70.3	70.7	1443.9	34.5	90.6	87.9	58.4	24.3	6.9
White	70.1	70.6	1440.3	29.6	96.3	85.0	55.5	25.5	8.0
Black	71.7	71.8	1499.7	60.5	77.6	100.2	65.3	20.4	0.0
Other	66.5	67.1	1454.1	23.9	67.7	85.3	82.4	24.9	16.1
1985-1989	72.0	72.3	1417.2	30.2	90.4	87.9	55.6	24.6	6.7
White	72.6	72.9	1431.8	28.1	92.8	88.1	55.8	26.0	6.9
Black	72.0	72.1	1392.2	40.8	87.4	88.6	54.0	20.5	3.3
Other	59.6	60.1	1270.2	23.2	62.6	78.2	61.3	21.3	16.7

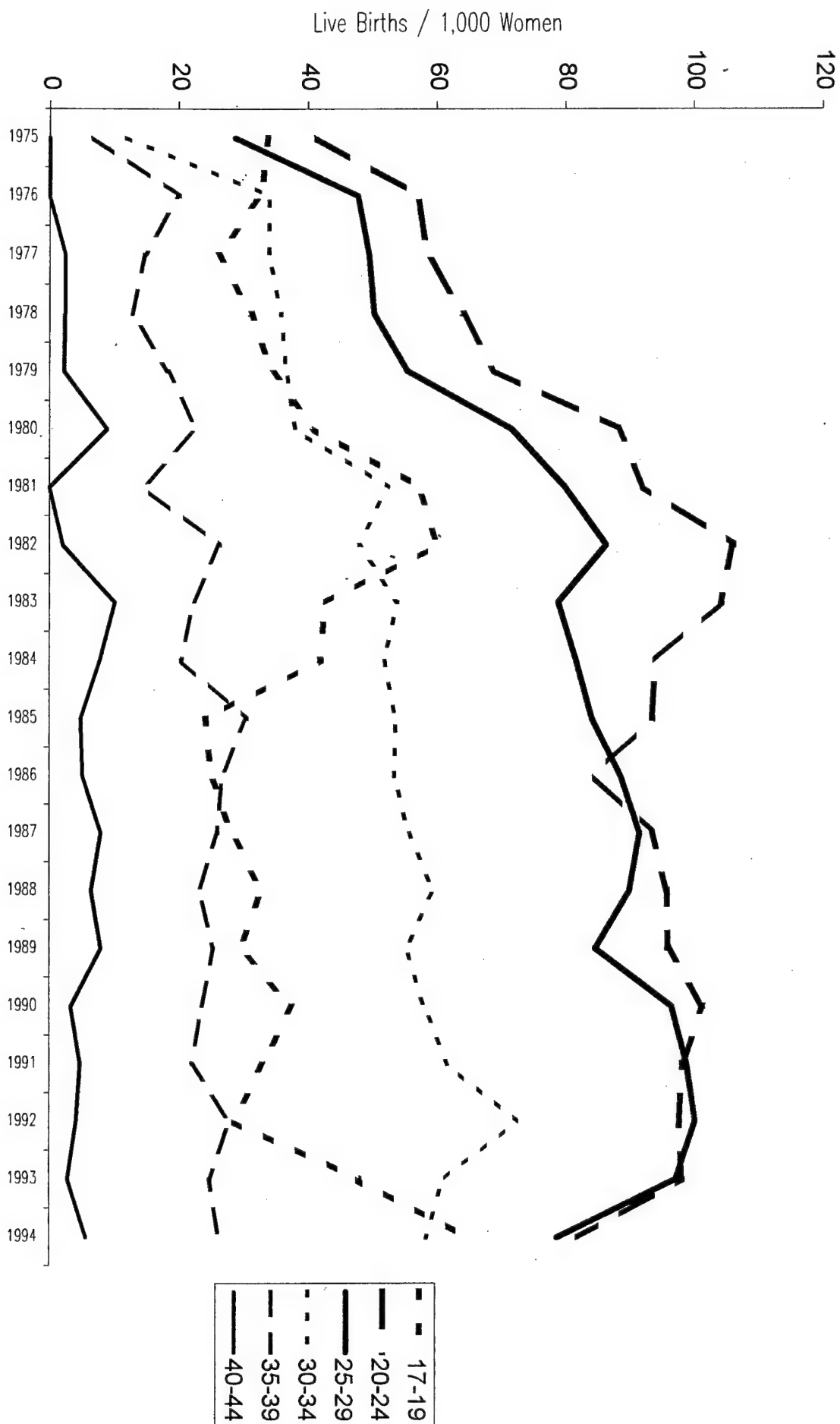
Table 15. (cont'd.) Total Live Births per 1,000, Total Fertility Rate and Age-Specific Births per 1,000 ADAP Women by Race, 1975-1994

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000					
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years
1990	73.6	74.0	1522.7	38.2	101.2	94.9	58.1	23.3	4.1
White	74.1	74.6	1533.1	37.7	101.7	96.9	58.3	23.7	3.4
Black	72.6	72.7	1527.6	40.4	102.7	91.2	57.8	21.8	7.7
Other	68.1	68.7	1365.7	38.5	86.2	80.9	56.8	26.2	0.0
1991	71.7	72.2	1521.3	34.5	99.1	96.9	60.6	21.8	5.1
White	72.2	72.8	1533.2	33.2	98.6	99.2	62.0	22.2	4.8
Black	68.4	68.6	1485.0	45.2	98.0	91.8	54.0	20.2	5.8
Other	76.9	77.6	1567.5	15.7	105.6	86.6	76.2	26.2	9.4
1992	71.5	72.2	1573.4	31.3	97.3	98.0	69.3	27.1	4.2
White	72.7	73.6	1604.4	28.7	98.1	100.6	72.7	28.1	4.2
Black	66.5	66.9	1490.5	44.4	96.2	91.5	57.0	23.1	3.6
Other	71.9	72.5	1563.6	27.5	87.3	85.7	81.7	33.0	8.5
1993	69.1	72.2	1544.1	48.2	98.4	94.3	60.1	24.6	2.6
White	70.3	71.3	1569.7	48.2	98.4	97.6	61.3	24.9	2.9
Black	62.8	63.3	1440.7	50.5	100.1	81.5	53.3	22.0	1.0
Other	79.0	80.0	1723.8	39.3	90.7	105.1	80.9	37.2	7.2
1994	61.4	70.0	1453.1	69.1	84.0	79.0	56.0	24.5	5.6
White	61.7	62.9	1455.1	64.9	82.4	79.0	58.6	26.3	5.7
Black	54.0	54.6	1323.9	72.6	81.0	73.3	45.6	16.8	4.5
Other	89.5	90.7	2032.7	111.9	115.0	100.7	71.8	39.9	12.0
1990-1994	69.6	62.5	1517.4	41.8	96.1	92.9	60.8	24.3	4.3
White	70.3	71.2	1533.3	40.1	96.0	94.9	62.5	25.0	4.2
Black	65.1	65.5	1452.0	49.1	96.0	86.5	53.6	20.8	4.1
Other	77.2	78.0	1640.8	41.8	97.3	91.6	73.4	32.5	8.2

Table 15. (cont'd.) Total Live Births per 1,000, Total Fertility Rate and Age-Specific Births per 1,000 ADAF Women by Race, 1975-1994

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000					
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years
1975-1994	69.6	70.3	589.7	38.0	86.9	81.4	55.0	23.8	4.7
White	69.5	70.0	1372.8	36.8	86.9	81.1	55.3	24.5	4.7
Black	70.9	71.2	1381.7	45.6	89.5	82.7	52.1	20.9	3.7
Other	64.3	64.9	1353.4	29.0	72.9	77.4	65.5	28.1	9.3

Figure 15a. Live Births per 1000 White ADAF Women
all age groups, 1975-1994



**Figure 15b. Live Births per 1000 Black ADAF women
all age groups, 1975-1994**

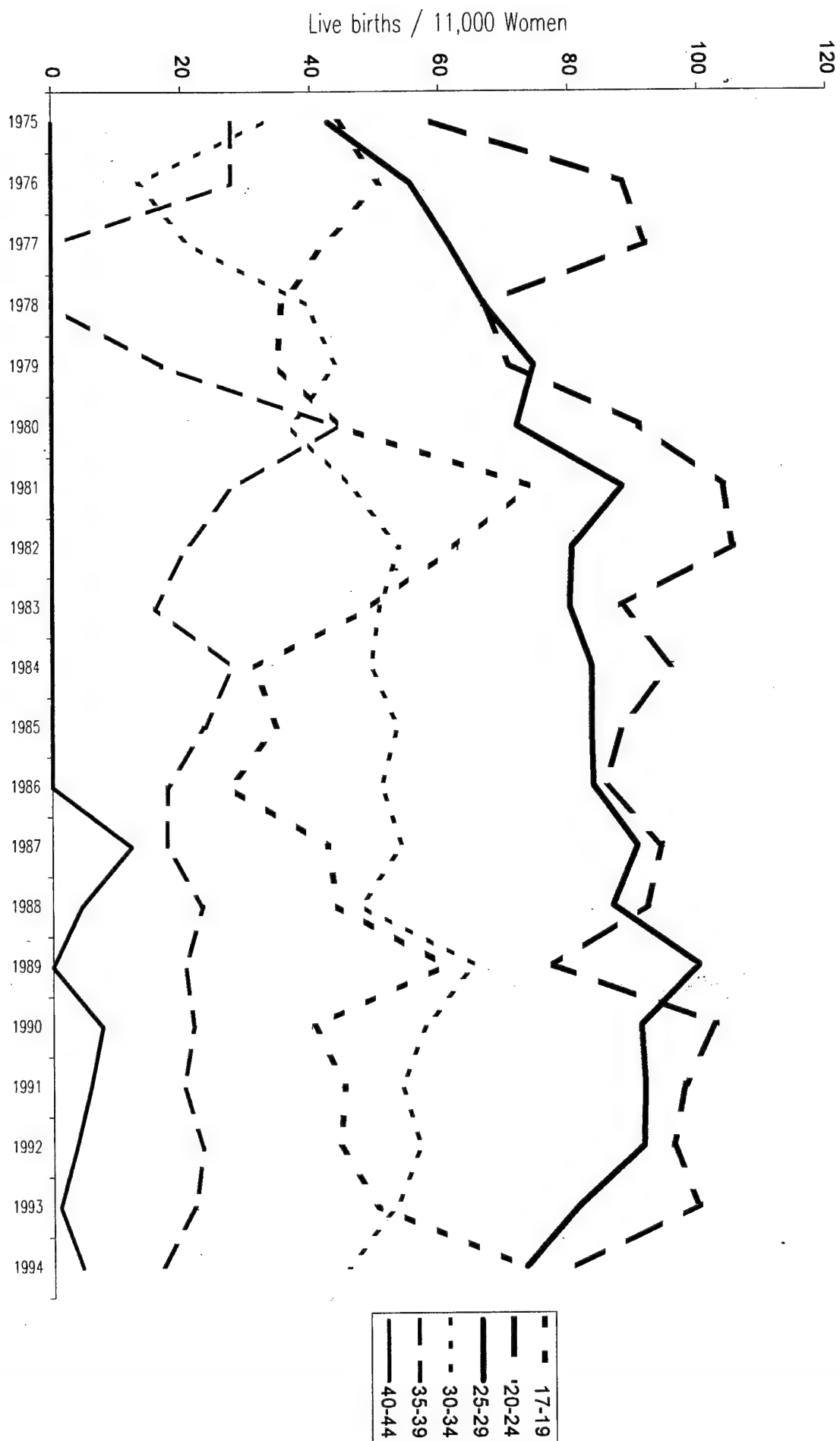


Figure 15c. Live Births per 1000 Other ADAF Women
all age groups, 1975-1994

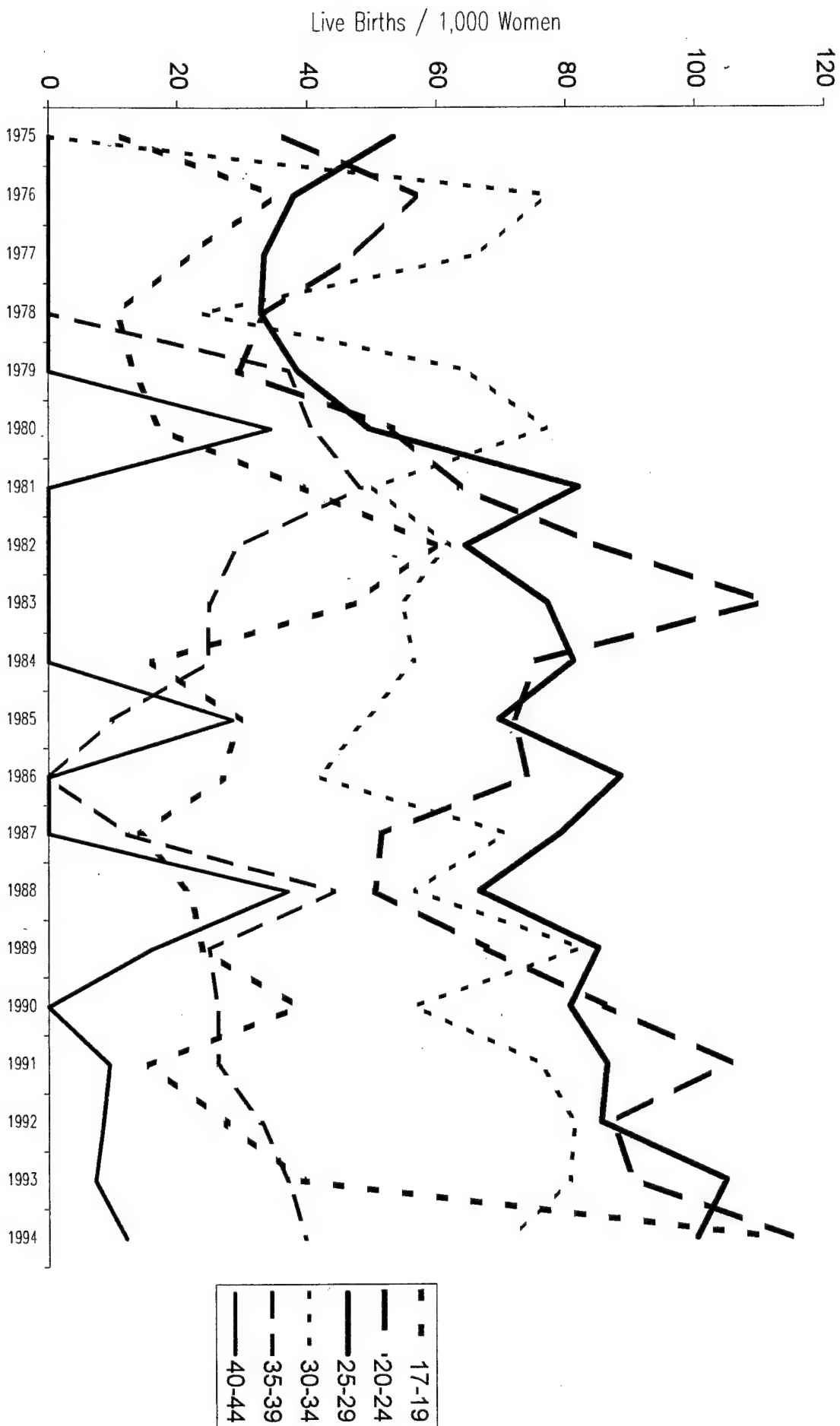


Figure 15d. Total Fertility Rates for ADAF Women by Race,
1975-1994

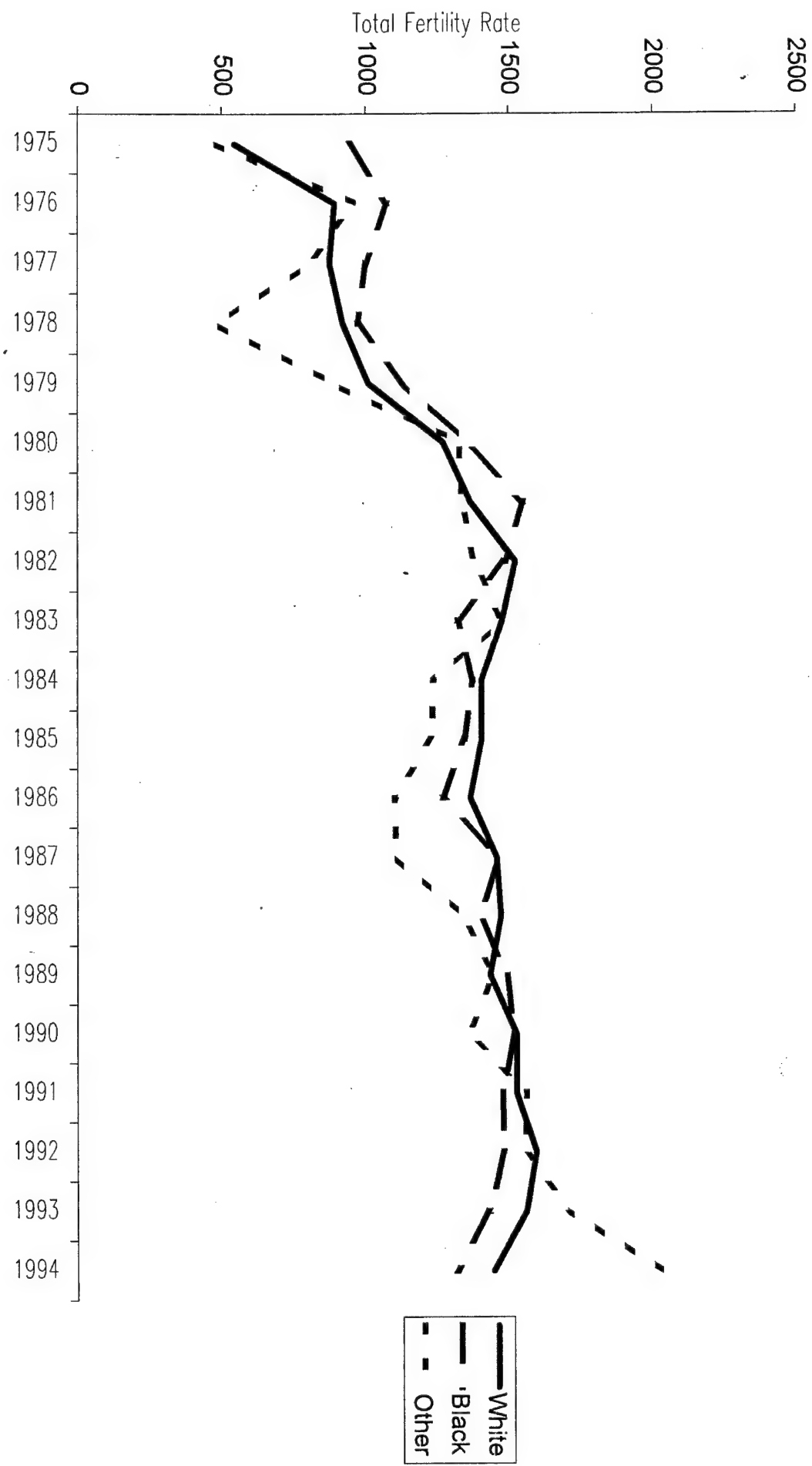


Table 16. Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Married and Non-Married Active Duty Air Force (ADAF) Women, 1975-1994
 Total Fertility Rate calculated as the sum of Age-Specific Births per 1,000 multiplied by the age group interval.
 Age-Specific Births per 1,000 calculated as the number of live births in an age group per 1,000 ADAF women in that age group

Year and Marital Status	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975	37.3	37.8	589.7	35.0	44.5	31.3	13.4	7.8	0.0	
Married	73.3	73.7	1282.1	96.0	83.1	53.2	31.3	31.3	0.0	
Non-Married	9.3	9.49	136.3	11.1	11.3	6.5	2.8	0.0	0.0	
1976	51.7	52.3	922.9	34.6	62.3	49.0	32.7	19.9	0.0	
Married	101.7	102.1	2089.4	177.0	110.0	82.1	67.2	52.4	0.0	
Non-Married	15.8	16.03	230.8	12.7	21.4	10.2	4.8	2.2	0.0	
1977	52.1	52.4	901.3	27.7	63.4	51.4	33.5	13.0	2.3	
Married	97.9	98.3	1811.7	116.2	110.9	82.2	60.3	29.3	9.9	
Non-Married	9.6	9.72	155.2	8.1	12.8	5.8	3.1	4.4	0.0	
1978	52.9	53.2	924.3	31.3	63.8	53.1	35.9	11.1	2.2	
Married	96.9	97.2	1804.2	121.9	109.3	84.9	59.7	25.5	8.3	
Non-Married	12.3	12.36	183.2	11.4	16.4	7.7	3.4	2.2	0.0	
1979	57.5	57.7	1039.7	33.9	68.2	59.0	38.8	19.6	2.0	
Married	105.9	106.2	2041.3	135.6	121.7	93.0	62.9	42.4	6.8	
Non-Married	12.5	12.59	185.2	11.5	16.3	8.5	5.4	0.0	0.0	
1975-1979	51.5	51.9	906.9	32.3	61.5	51.2	33.6	14.4	1.3	
Married	97.2	97.5	1846.7	127.2	108.9	83.1	59.7	36.0	5.3	
Non-Married	12.0	12.15	179.9	11.0	15.8	7.8	4.1	1.8	0.0	

Table 16. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Married and Non-Married ADAF Women, 1975-1994											
Year and Marital Status	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000							
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years		
1980	71.3	71.6	1291.9	41.0	87.7	71.2	39.1	25.8	10.0		
Married	115.5	115.8	2361.5	174.1	143.3	92.0	53.8	54.3	24.5		
Non-Married	16.7	16.77	263.6	9.8	21.5	17.5	4.9	0.0	3.0		
1981	79.8	80.1	1398.9	59.3	93.4	81.9	51.1	17.8	0.0		
Married	121.7	122.0	2377.9	212.1	145.7	108.3	61.9	32.4	0.0		
Non-Married	19.0	19.08	301.1	18.2	22.6	17.4	9.3	0.0	0.0		
1982	85.7	86.0	1519.0	60.6	105.4	84.6	49.7	25.8	1.9		
Married	124.5	124.8	2613.6	244.9	157.9	109.2	62.6	41.3	4.9		
Non-Married	21.7	21.84	347.1	18.1	28.4	18.0	9.4	2.8	0.0		
1983	80.4	80.7	1455.4	44.2	101.6	79.3	53.4	21.5	8.8		
Married	118.5	118.8	2465.1	200.3	159.7	104.7	66.5	25.2	16.7		
Non-Married	18.0	18.07	301.6	13.2	23.8	15.7	8.3	4.7	0.0		
1984	76.1	76.4	1399.8	39.0	94.1	82.3	51.5	21.9	6.8		
Married	114.1	114.5	2572.5	230.8	154.4	109.4	64.5	32.3	15.3		
Non-Married	17.7	17.77	292.6	11.2	23.5	17.2	8.4	2.7	0.0		
1980-1984	78.7	79.1	1419.7	49.1	96.5	80.1	50.0	22.4	5.5		
Married	118.9	119.2	2456.5	207.7	152.1	105.1	62.9	34.2	12.3		
Non-Married	18.6	18.69	303.6	14.0	24.0	17.1	8.2	2.4	0.6		

Table 16. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Married and Non-Married ADAF Women, 1975-1994

Year and Marital Status	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000					
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years
1985	73.4	73.7	1396.2	26.5	91.9	83.7	53.6	28.6	5.5
Married	112.4	112.8	2435.1	172.9	160.7	110.9	65.8	37.4	8.6
Non-Married	18.3	18.39	310.2	8.7	25.2	18.7	10.8	2.2	0.0
1986	70.0	70.2	1343.5	25.7	84.5	87.7	52.6	24.1	4.3
Married	109.6	110.0	2262.0	123.0	153.0	121.7	64.2	31.7	8.1
Non-Married	16.7	16.76	282.2	10.8	23.2	15.5	11.2	0.0	0.0
1987	73.7	74.0	1448.8	30.5	92.1	91.3	56.0	23.8	8.3
Married	112.0	112.4	2465.3	160.5	159.9	125.8	68.8	29.3	12.9
Non-Married	21.3	21.35	371.8	11.9	30.6	20.7	13.0	3.0	0.0
1988	72.7	73.0	1455.0	34.6	93.3	88.7	56.8	24.0	7.3
Married	104.8	105.3	2361.8	148.7	156.9	117.0	69.5	29.5	10.2
Non-Married	22.6	22.66	402.6	16.0	30.8	24.4	13.1	2.6	0.0
1989	70.3	70.7	1443.9	34.5	90.6	87.9	58.4	24.3	6.9
Married	112.0	112.6	2707.1	205.9	168.0	127.9	78.6	34.3	9.1
Non-Married	25.9	26.09	486.7	15.1	36.8	27.5	15.4	4.9	3.6
1985-1989	72.0	72.3	1417.2	30.2	90.4	87.9	55.6	24.6	6.7
Married	110.2	110.6	2439.8	160.0	159.7	120.6	69.6	32.1	9.9
Non-Married	20.9	21.04	372.7	12.4	29.2	21.2	12.7	2.8	1.1

Table 16. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Married and Non-Married ADAF Women, 1975-1994

Year and Marital Status	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000					
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years
1990	73.6	74.0	1522.7	38.2	101.2	94.9	58.1	23.3	4.1
Married	114.3	115.0	2797.7	199.3	179.6	140.7	81.9	32.3	5.5
Non-Married	28.6	28.74	538.6	17.7	42.9	32.3	14.6	5.4	1.9
1991	71.7	72.2	1521.3	34.5	99.1	96.9	60.6	21.8	5.1
Married	108.7	109.6	2636.9	156.7	167.9	144.5	85.8	28.8	6.2
Non-Married	28.2	28.41	552.7	17.3	44.4	30.5	13.8	8.1	3.3
1992	71.5	72.2	1573.4	31.3	97.3	98.0	69.3	27.1	4.2
Married	100.2	101.4	2479.4	137.5	153.4	128.7	90.4	34.8	6.1
Non-Married	25.1	25.29	501.7	13.1	38.5	31.1	15.5	6.5	0.7
1993	69.1	70.0	1544.1	48.2	98.4	94.3	60.1	24.6	2.6
Married	94.1	95.3	2469.6	187.9	147.4	123.9	74.7	31.1	4.0
Non-Married	25.3	25.63	508.7	18.2	39.9	27.9	17.6	5.4	0.0
1994	61.4	62.5	1453.1	69.1	84.0	79.0	56.0	24.5	5.6
Married	83.6	85.0	2702.2	317.9	133.9	103.4	72.6	31.7	8.1
Non-Married	21.8	22.18	448.5	29.1	32.5	21.5	12.6	5.1	0.6
1990-1994	69.6	70.3	1517.4	41.8	96.1	92.9	60.8	24.3	4.3
Married	100.4	101.5	2589.1	188.0	157.0	129.0	81.3	31.7	6.1
Non-Married	26.0	26.20	508.8	18.1	39.8	29.0	14.8	6.1	1.2

Table 16. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Married and Non-Married ADAF Women, 1975-1994

Year and Marital Status	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate 17-44	Age-Specific Live Births / 1,000					
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years
1975-1994	69.6	70.0	589.7	38.0	86.9	81.4	55.0	23.8	4.7
Married	107.5	108.1	2350.5	167.9	144.9	112.9	72.1	32.2	7.2
Non-Married	19.9	20.03	359.6	13.5	27.0	19.8	11.7	4.3	0.9

Figure 16a. Live Births per 1000 Married ADAF Women
All Ages, 1975-1994

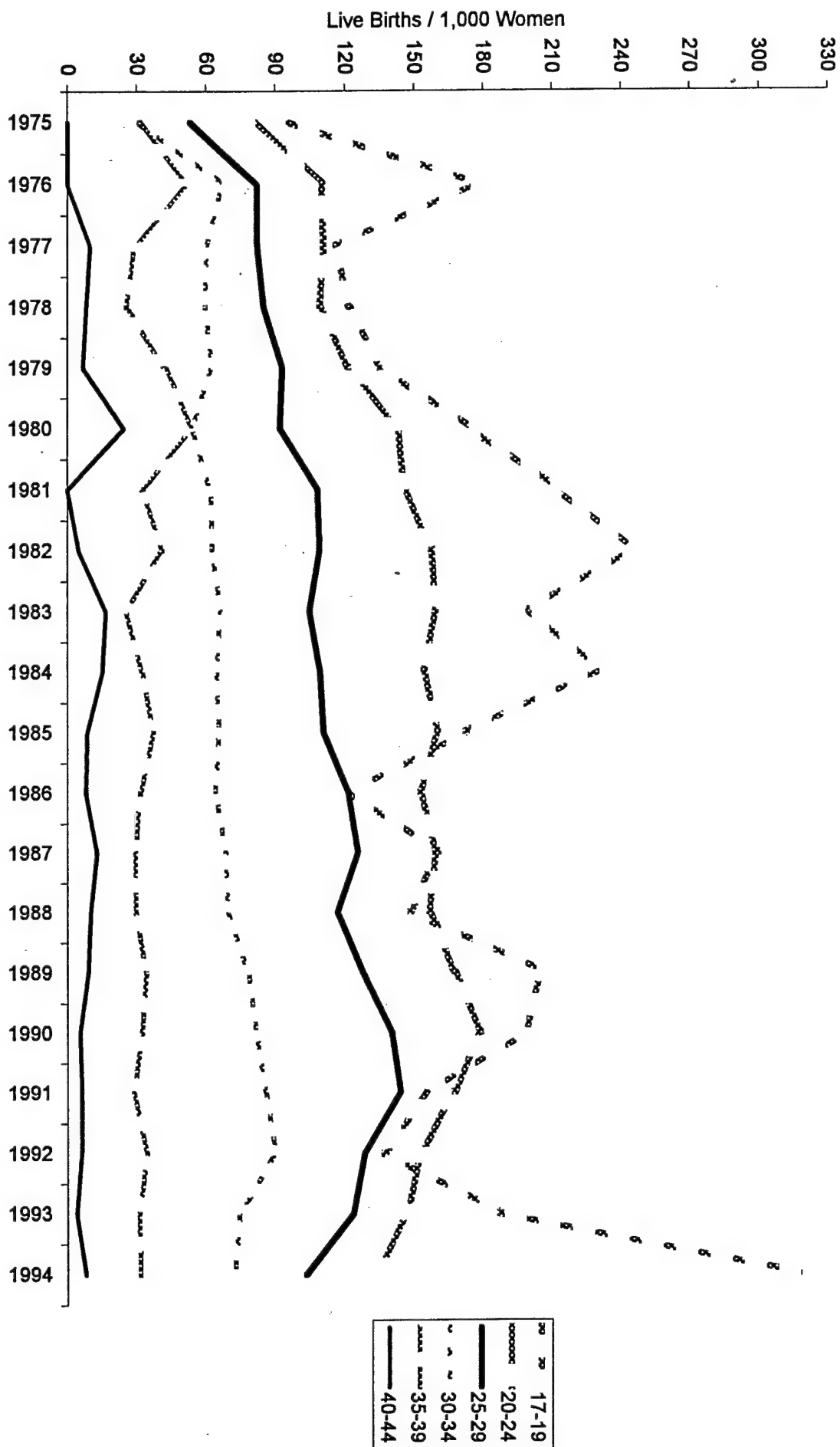
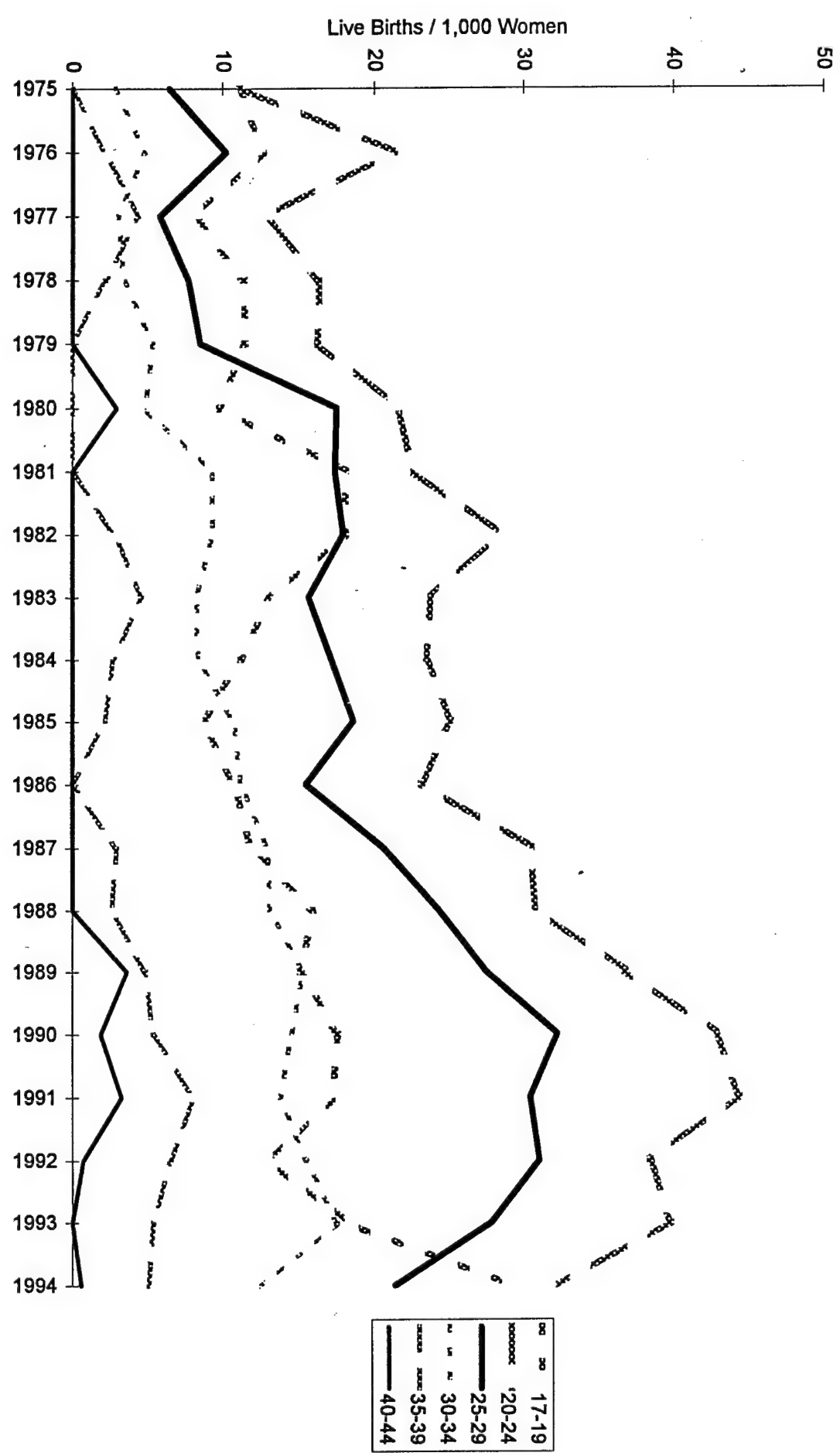


Figure 16b. Live Births per 1000 Non-Married ADAF Women
All Ages, 1975-1994



**Figure 16c. Total Fertility Rates for ADAF Women by Marital Status (Married and Non-Married),
1975-1994**

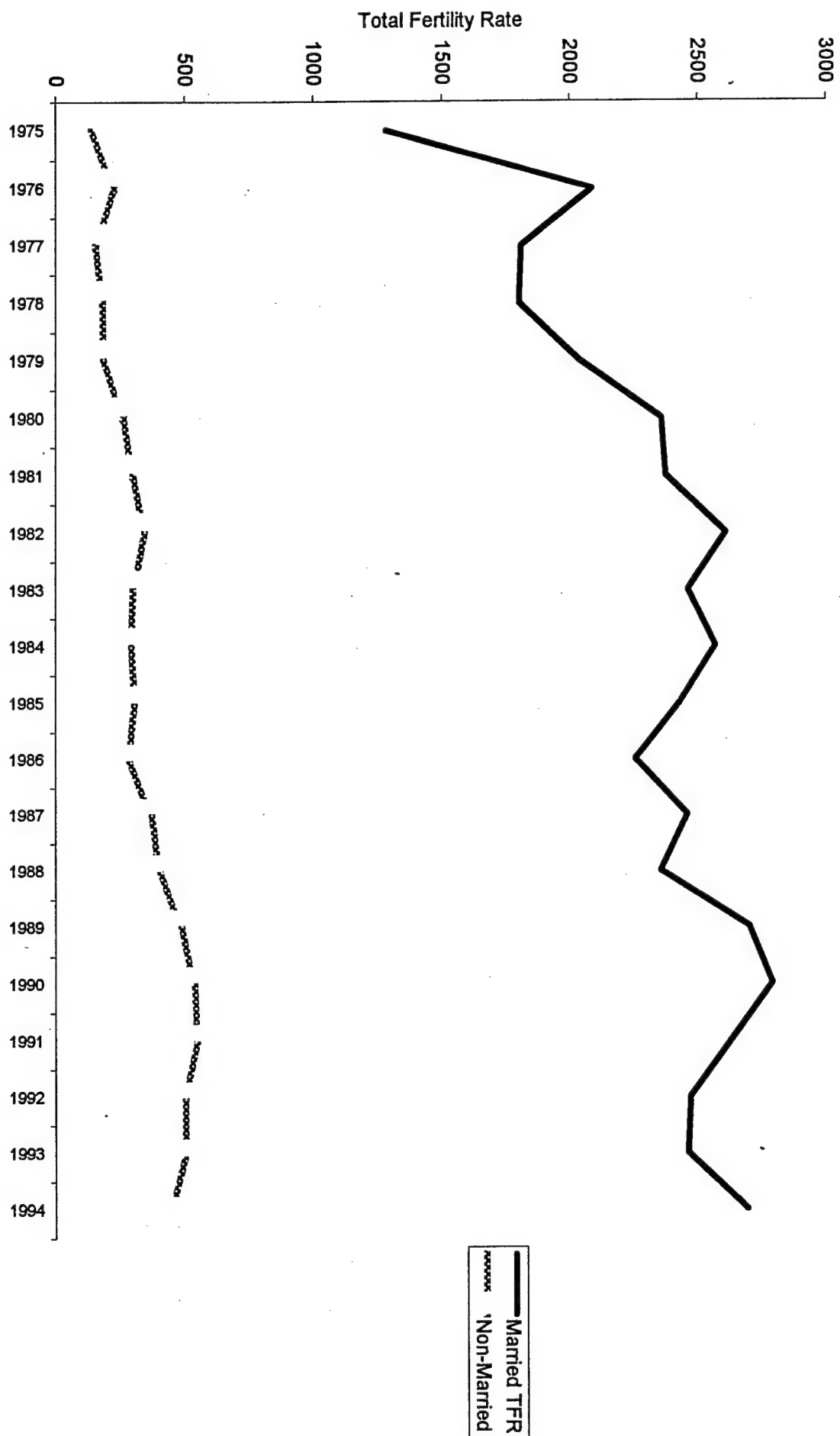


Table 17. Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Women By Rank/Paygrade, 1976-1994

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate Enlisted 17-44 Officer 20-44	Age-Specific Births / 1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975										
Enlisted Grades E1-E3	35.7	37.8		25.9	44.6	31.3	11.6	7.9	0.0	
Enlisted Grades E4-E6	34.2	34.3		25.9	39.2	28.9	0.0	0.0	0.0	
Enlisted Grades E7-E9	55.6	55.9		0.0	64.1	44.4	7.6	26.4	0.0	
Company Grades O1-O3	8.5	12.7	665.9	0.0	0.0	0.0	0.0	27.1	0.0	
Field Grades O4+	12.3	12.3		0.0	6.5	17.0	12.6	7.4	0.0	
	1.0	1.6	202.5	0.0	0.0	0.0	26.4	0.0	0.0	
1976										
Enlisted Grades E1-E3	53.9	52.3		43.4	63.5	48.9	31.9	19.8	0.0	
Enlisted Grades E4-E6	53.3	53.4		43.4	60.4	36.9	0.0	0.0	0.0	
Enlisted Grades E7-E9	69.2	69.4		0.0	77.3	62.1	34.9	12.8	0.0	
Company Grades O1-O3	16.4	24.4	1007.9	0.0	0.0	0.0	0.0	44.5	0.0	
Field Grades O4+	27.7	27.7		0.0	15.9	36.5	30.8	18.1	0.0	
	7.1	14.3	513.3	0.0	0.0	0.0	47.7	19.4	0.0	
1977										
Enlisted Grades E1-E3	51.8	52.4		26.9	63.6	51.5	32.5	13.1	0.0	
Enlisted Grades E4-E6	44.7	44.8		26.9	54.6	37.2	0.0	0.0	0.0	
Enlisted Grades E7-E9	73.3	73.7		0.0	85.1	64.4	25.3	11.7	0.0	
Company Grades O1-O3	0.0	0.0	843.1	0.0	0.0	0.0	0.0	0.0	0.0	
Field Grades O4+	28.8	29.0		0.0	17.3	35.8	35.8	8.5	0.0	
	12.2	18.0	539.6	0.0	0.0	0.0	113.2	18.9	0.0	
1978										
Enlisted Grades E1-E3	52.6	53.2		30.3	62.6	55.3	34.9	11.1	2.2	
Enlisted Grades E4-E6	45.1	45.2		30.3	53.7	39.8	0.0	0.0	0.0	
Enlisted Grades E7-E9	73.5	73.8		0.0	83.9	67.8	41.9	0.0	0.0	
Company Grades O1-O3	0.0	0.0	905.8	0.0	0.0	0.0	0.0	0.0	0.0	
Field Grades O4+	32.0	32.0		0.0	22.5	40.6	30.3	15.7	0.0	
	5.6	9.5	544.0	0.0	0.0	0.0	15.4	12.1	2.9	
1979										
Enlisted Grades E1-E3	57.2	57.7		33.7	67.4	59.4	39.0	20.3	0.0	
Enlisted Grades E4-E6	52.3	52.4		33.7	61.7	50.3	0.0	0.0	0.0	
Enlisted Grades E7-E9	75.0	75.1		0.0	88.3	69.9	37.3	21.3	0.0	
Company Grades O1-O3	21.9	26.8	1131.8	0.0	0.0	0.0	0.0	60.1	0.0	
Field Grades O4+	33.0	33.1		0.0	15.1	41.0	45.5	19.9	0.0	
	5.6	7.5	579.6	0.0	0.0	0.0	10.2	14.5	0.0	
1975-1979										
Enlisted Grades E1-E3	51.3	51.9		31.6	61.3	51.9	32.9	14.5	0.4	
Enlisted Grades E4-E6	46.4	46.5		31.6	54.6	39.9	0.0	0.0	0.0	
Enlisted Grades E7-E9	71.2	71.4		0.0	81.4	64.9	34.6	14.5	0.0	
Company Grades O1-O3	9.4	12.8	953.6	0.0	0.0	0.0	0.0	25.9	0.0	
Field Grades O4+	27.7	27.8		0.0	15.7	35.3	32.7	14.0	0.0	
	6.4	10.2	490.4	0.0	0.0	0.0	39.4	13.3	0.6	

Table 17. (cont'd.) Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 for ADAF Women by Age and Rank/Paygrade, 1976-1994

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate Enlisted 17-44 Officer 20-44	Age-Specific Births / 1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1980										
Enlisted Grades E1-E3	71.2	71.6		40.6	87.9	71.3	38.1	25.8	4.0	
Enlisted Grades E4-E6	70.0	70.2		40.7	84.8	69.9	0.0	0.0	0.0	
Enlisted Grades E7-E9	86.8	87.0		0.0	102.1	82.3	43.9	17.2	0.0	
Company Grades O1-O3	12.2	14.3	1342.2	0.0	0.0	0.0	0.0	17.0	21.8	
Field Grades O4+	35.4	35.8		0.0	27.6	43.0	31.5	22.7	0.0	
	14.3	20.0	667.3	0.0	0.0	0.0	35.4	35.1	2.7	
1981										
Enlisted Grades E1-E3	79.7	80.1		58.6	93.6	82.1	50.4	17.8	0.0	
Enlisted Grades E4-E6	81.4	81.6		58.9	90.2	94.2	0.0	0.0	0.0	
Enlisted Grades E7-E9	90.2	90.4		0.0	103.8	89.3	50.3	6.2	0.0	
Company Grades O1-O3	14.2	15.4	1392.0	0.0	0.0	0.0	30.8	13.0	0.0	
Field Grades O4+	48.0	48.0		0.0	40.4	52.7	52.1	23.4	0.0	
	12.4	17.3	845.8	0.0	0.0	0.0	88.4	22.0	0.0	
1982										
Enlisted Grades E1-E3	85.5	86.0		59.9	105.7	84.5	48.9	26.0	1.9	
Enlisted Grades E4-E6	85.1	85.4		60.2	95.0	82.2	0.0	0.0	0.0	
Enlisted Grades E7-E9	98.7	98.9		0.0	127.6	91.4	49.2	21.4	0.0	
Company Grades O1-O3	14.6	34.8	1516.3	0.0	0.0	0.0	31.3	8.7	0.0	
Field Grades O4+	52.0	52.0		0.0	32.7	64.8	51.4	27.0	0.0	
	15.1	20.3	903.2	0.0	0.0	0.0	31.3	35.3	2.6	
1983										
Enlisted Grades E1-E3	80.4	80.7		43.6	101.8	79.4	53.4	21.6	5.3	
Enlisted Grades E4-E6	75.7	75.8		43.7	87.0	68.2	0.0	0.0	0.0	
Enlisted Grades E7-E9	94.7	94.9		0.0	129.8	86.2	53.4	17.9	0.0	
Company Grades O1-O3	13.4	23.0	1426.1	0.0	0.0	0.0	20.7	14.1	0.0	
Field Grades O4+	52.3	52.4		0.0	35.7	63.8	54.7	20.0	0.0	
	22.2	28.6	934.3	0.0	0.0	0.0	88.9	31.3	7.3	
1984										
Enlisted Grades E1-E3	75.5	76.4		38.7	93.7	81.8	51.0	21.9	5.1	
Enlisted Grades E4-E6	74.3	74.6		38.7	87.0	67.4	0.0	0.0	0.0	
Enlisted Grades E7-E9	86.0	86.1		0.0	112.6	88.5	47.9	21.8	0.0	
Company Grades O1-O3	24.1	31.2	1365.0	0.0	0.0	0.0	59.8	0.0	0.0	
Field Grades O4+	52.5	52.6		0.0	30.0	66.7	57.1	19.6	0.0	
	24.6	31.2	933.6	0.0	0.0	0.0	80.6	33.3	7.3	
1980-1984										
Enlisted Grades E1-E3	78.5	79.1		48.6	96.5	80.0	49.4	22.4	3.3	
Enlisted Grades E4-E6	77.1	77.3		48.7	88.7	76.1	0.0	0.0	0.0	
Enlisted Grades E7-E9	91.4	91.6		0.0	115.2	87.8	49.4	18.7	0.0	
Company Grades O1-O3	17.3	26.1	1416.7	0.0	0.0	0.0	37.9	8.1	4.1	
Field Grades O4+	48.5	48.7		0.0	33.2	58.7	50.7	22.2	0.0	
	18.3	24.3	865.4	0.0	0.0	0.0	67.8	31.6	4.1	

Table 17. (cont'd.) Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 for ADAF Women by Age and Rank/Paygrade, 1976-1994

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate Enlisted 17-44 Officer 20-44	Age-Specific Births / 1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1985										
Enlisted Grades E1-E3	71.4	73.7		25.7	89.5	81.5	51.9	28.4	5.6	
Enlisted Grades E4-E6	62.3	62.6		25.7	74.9	76.5	0.0	0.0	0.0	
Enlisted Grades E7-E9	87.1	87.1	1359.7	0.0	121.6	89.5	48.6	22.5	0.0	
Company Grades O1-O3	12.5	15.7		0.0	0.0	0.0	13.4	14.0	11.7	
Field Grades O4+	48.9	48.9		0.0	22.3	56.3	61.2	36.6	0.0	
	31.9	38.7	928.0	0.0	0.0	0.0	99.8	39.1	6.7	
1986										
Enlisted Grades E1-E3	69.9	70.2		25.0	84.6	88.1	52.4	24.1	3.3	
Enlisted Grades E4-E6	58.9	59.1		25.0	71.9	70.7	0.0	0.0	0.0	
Enlisted Grades E7-E9	86.5	86.6	1318.3	0.0	116.4	97.2	49.4	18.4	0.0	
Company Grades O1-O3	19.7	22.9		0.0	0.0	0.0	35.6	13.8	0.0	
Field Grades O4+	52.6	52.7		0.0	22.8	66.0	60.9	33.1	0.0	
	27.2	33.1	948.6	0.0	0.0	0.0	73.7	35.7	5.8	
1987										
Enlisted Grades E1-E3	73.5	74.0		30.4	92.2	91.4	55.6	23.9	5.0	
Enlisted Grades E4-E6	73.4	73.7		30.4	89.7	84.6	0.0	0.0	0.0	
Enlisted Grades E7-E9	84.4	84.6	1419.7	0.0	109.2	99.5	54.2	17.8	0.0	
Company Grades O1-O3	16.8	18.4		0.0	0.0	0.0	27.3	13.2	6.0	
Field Grades O4+	53.8	54.0		0.0	18.3	67.3	61.6	41.2	0.0	
	28.8	34.0	963.5	0.0	0.0	0.0	84.9	30.6	8.2	
1988										
Enlisted Grades E1-E3	72.5	74.0		34.2	93.4	88.8	56.1	24.1	5.4	
Enlisted Grades E4-E6	83.0	83.5		34.2	102.5	90.8	0.0	0.0	0.0	
Enlisted Grades E7-E9	77.6	77.8	1434.7	0.0	93.1	96.2	52.9	20.0	0.0	
Company Grades O1-O3	17.7	20.0		0.0	0.0	0.0	29.3	14.2	8.1	
Field Grades O4+	52.0	52.1		0.0	16.5	61.8	68.4	29.7	0.0	
	32.5	38.7	948.0	0.0	0.0	0.0	76.0	42.1	8.7	
1989										
Enlisted Grades E1-E3	66.1	70.7		30.4	87.9	80.7	54.1	24.3	4.4	
Enlisted Grades E4-E6	74.0	74.3		30.4	92.4	92.5	0.0	0.0	0.0	
Enlisted Grades E7-E9	72.2	72.3	1334.7	0.0	92.7	84.5	53.3	21.6	0.0	
Company Grades O1-O3	15.5	17.0		0.0	0.0	0.0	32.3	12.5	0.0	
Field Grades O4+	49.8	50.4		0.0	19.6	61.7	61.6	32.4	0.0	
	28.3	32.9	930.4	0.0	0.0	0.0	57.2	38.9	11.2	
1985-1989										
Enlisted Grades E1-E3	70.7	72.3		29.0	89.5	86.1	54.1	24.6	4.7	
Enlisted Grades E4-E6	70.0	70.3		29.1	85.8	82.6	0.0	0.0	0.0	
Enlisted Grades E7-E9	81.3	81.4	1370.1	0.0	106.4	93.4	51.8	20.1	0.0	
Company Grades O1-O3	16.6	18.7		0.0	0.0	0.0	28.9	13.4	4.0	
Field Grades O4+	51.4	51.6		0.0	20.1	62.7	62.8	34.3	0.0	
	29.7	35.3	946.1	0.0	0.0	0.0	75.9	37.5	8.5	

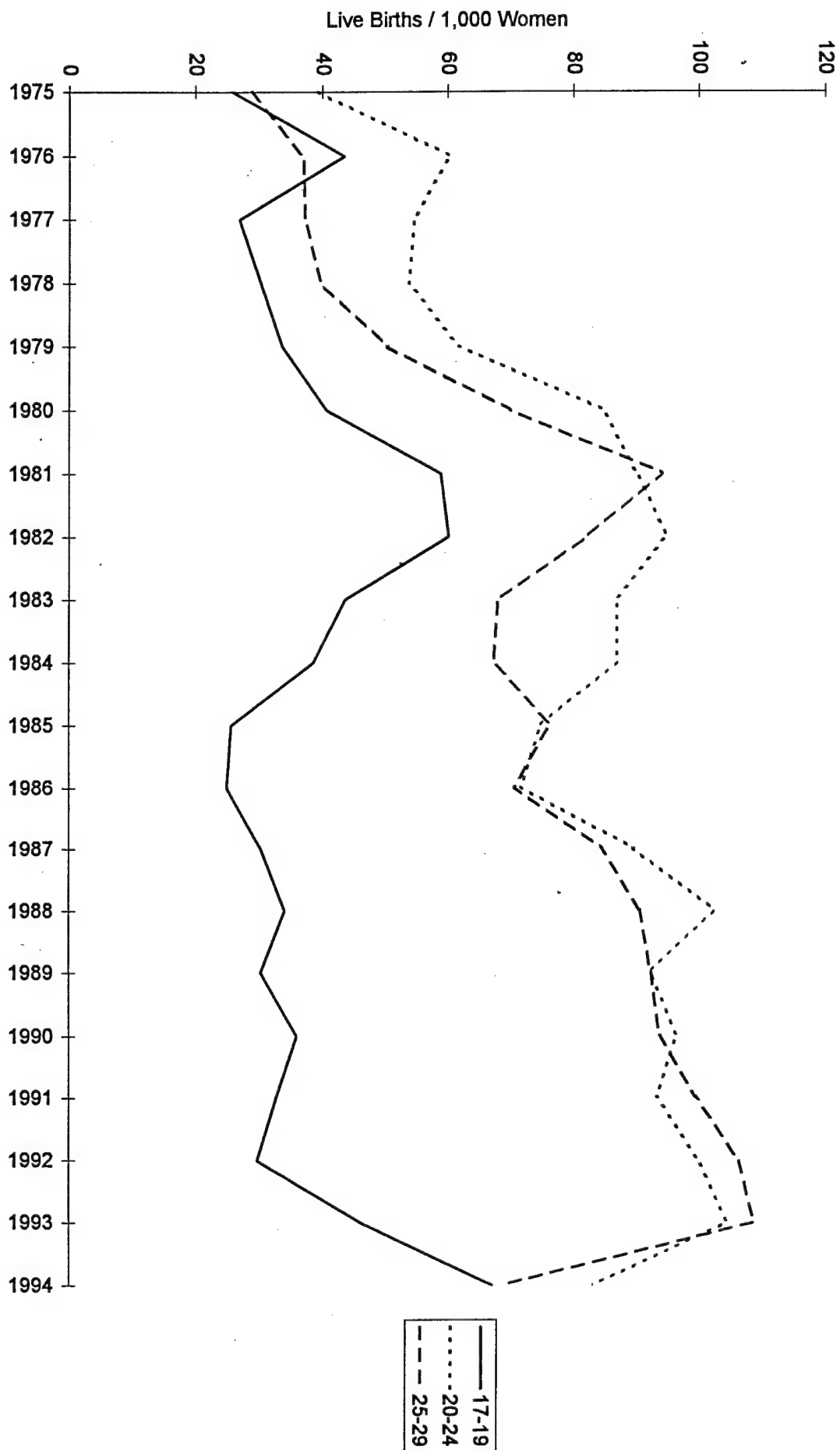
Table 17. (cont'd.) Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 for ADAF Women by Age and Rank/Paygrade, 1975-1994

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate Enlisted 17-44 Officer 20-44	Age-Specific Births / 1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1990										
Enlisted Grades E1-E3	69.4	74.0		36.1	94.1	91.4	55.0	23.0	2.2	
Enlisted Grades E4-E6	79.3	79.9		36.1	96.7	93.9	0.0	0.0	0.0	
Enlisted Grades E7-E9	76.9	77.1		0.0	101.4	98.1	52.9	18.7	0.0	
Company Grades O1-O3	13.9	14.9	1433.0	0.0	0.0	0.0	27.9	13.8	0.0	
Field Grades O4+	52.0	52.2		0.0	18.9	67.1	64.9	29.6	0.0	
	31.3	36.1	965.8	0.0	0.0	0.0	80.9	42.6	6.4	
1991										
Enlisted Grades E1-E3	67.7	72.2		32.9	92.9	92.5	57.6	21.4	2.7	
Enlisted Grades E4-E6	78.6	79.2		32.9	93.5	99.7	0.0	0.0	0.0	
Enlisted Grades E7-E9	74.7	74.9		0.0	101.1	96.3	54.7	18.2	0.0	
Company Grades O1-O3	11.6	12.2	1417.2	0.0	0.0	0.0	21.5	12.7	2.5	
Field Grades O4+	57.0	57.6		0.0	20.3	76.4	71.5	29.9	0.0	
	27.4	31.7	1038.2	0.0	0.0	0.0	95.2	34.8	6.7	
1992										
Enlisted Grades E1-E3	68.4	72.2		29.9	92.2	94.5	67.6	26.6	2.6	
Enlisted Grades E4-E6	79.7	79.8		29.9	100.1	106.5	0.0	0.0	0.0	
Enlisted Grades E7-E9	75.5	75.8		0.0	92.4	99.6	62.7	22.5	0.0	
Company Grades O1-O3	13.7	14.4	1481.9	0.0	0.0	0.0	31.5	15.1	2.7	
Field Grades O4+	60.9	61.7		0.0	17.8	72.0	86.9	39.5	0.0	
	30.2	35.6	1125.0	0.0	0.0	0.0	109.4	44.1	6.1	
1993										
Enlisted Grades E1-E3	66.6	70.0		46.3	93.9	92.0	58.4	24.2	2.1	
Enlisted Grades E4-E6	88.2	88.5		46.3	104.6	109.0	0.0	0.0	0.0	
Enlisted Grades E7-E9	70.4	70.6		0.0	91.0	95.0	52.3	21.4	0.0	
Company Grades O1-O3	12.7	13.3	1465.1	0.0	0.0	0.0	36.6	14.7	0.8	
Field Grades O4+	58.8	59.7		0.0	21.3	73.7	83.2	35.1	0.0	
	22.4	26.7	1088.0	0.0	0.0	0.0	62.4	38.2	6.1	
1994										
Enlisted Grades E1-E3	59.6	62.5		67.2	82.2	76.3	54.9	24.2	2.3	
Enlisted Grades E4-E6	79.1	79.5		67.2	83.4	68.8	0.0	0.0	0.0	
Enlisted Grades E7-E9	62.0	62.6		0.0	90.6	80.1	47.9	21.1	0.0	
Company Grades O1-O3	8.6	9.4	1351.4	0.0	0.0	0.0	30.5	10.7	1.3	
Field Grades O4+	54.7	56.4		0.0	18.9	66.1	79.4	37.4	0.0	
	27.2	33.0	1064.8	0.0	0.0	0.0	97.3	45.7	6.6	
1990-1994										
Enlisted Grades E1-E3	66.4	70.3		40.0	91.1	89.5	58.6	23.9	2.4	
Enlisted Grades E4-E6	80.9	81.3		40.0	95.2	94.4	0.0	0.0	0.0	
Enlisted Grades E7-E9	72.2	72.5		0.0	95.8	94.1	54.1	20.4	0.0	
Company Grades O1-O3	12.0	12.7	1423.9	0.0	0.0	0.0	29.3	13.4	1.5	
Field Grades O4+	56.6	57.4		0.0	19.4	71.1	76.7	34.0	0.0	
	27.5	32.5	1053.5	0.0	0.0	0.0	89.0	41.0	6.4	

Table 17. (cont'd.) Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 for ADAF Women by Age and Rank/Paygrade, 1975-1994

	Total Live Births / 1,000 17-45+	General Fertility Rate	Total Fertility Rate Enlisted 17-44 Officer 20-44	Age-Specific Births / 1,000					
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years
1975-1994	68.2	70.0		36.9	85.5	80.1	53.5	23.6	2.8
Enlisted Grades E1-E3	67.8	68.1		37.0	80.6	69.5	0.0	0.0	0.0
Enlisted Grades E4-E6	79.9	80.1		0.0	102.0	88.7	51.5	20.1	0.0
Enlisted Grades E7-E9	13.4	15.1	1331.5	0.0	0.0	0.0	29.6	13.4	1.9
Company Grades O1-O3	48.6	49.0		0.0	22.9	59.3	60.6	30.5	0.0
Field Grades O4+	23.9	29.7	908.4	0.0	0.0	0.0	77.1	36.0	5.7

**Figure 17a. Live Births per 1000 ADAF Women
Enlisted Grades E1-E3, 1975-1994**



**Figure 17b. Live Births per 1000 ADAP Women
Enlisted Grades E4-E6, 1975-1994**

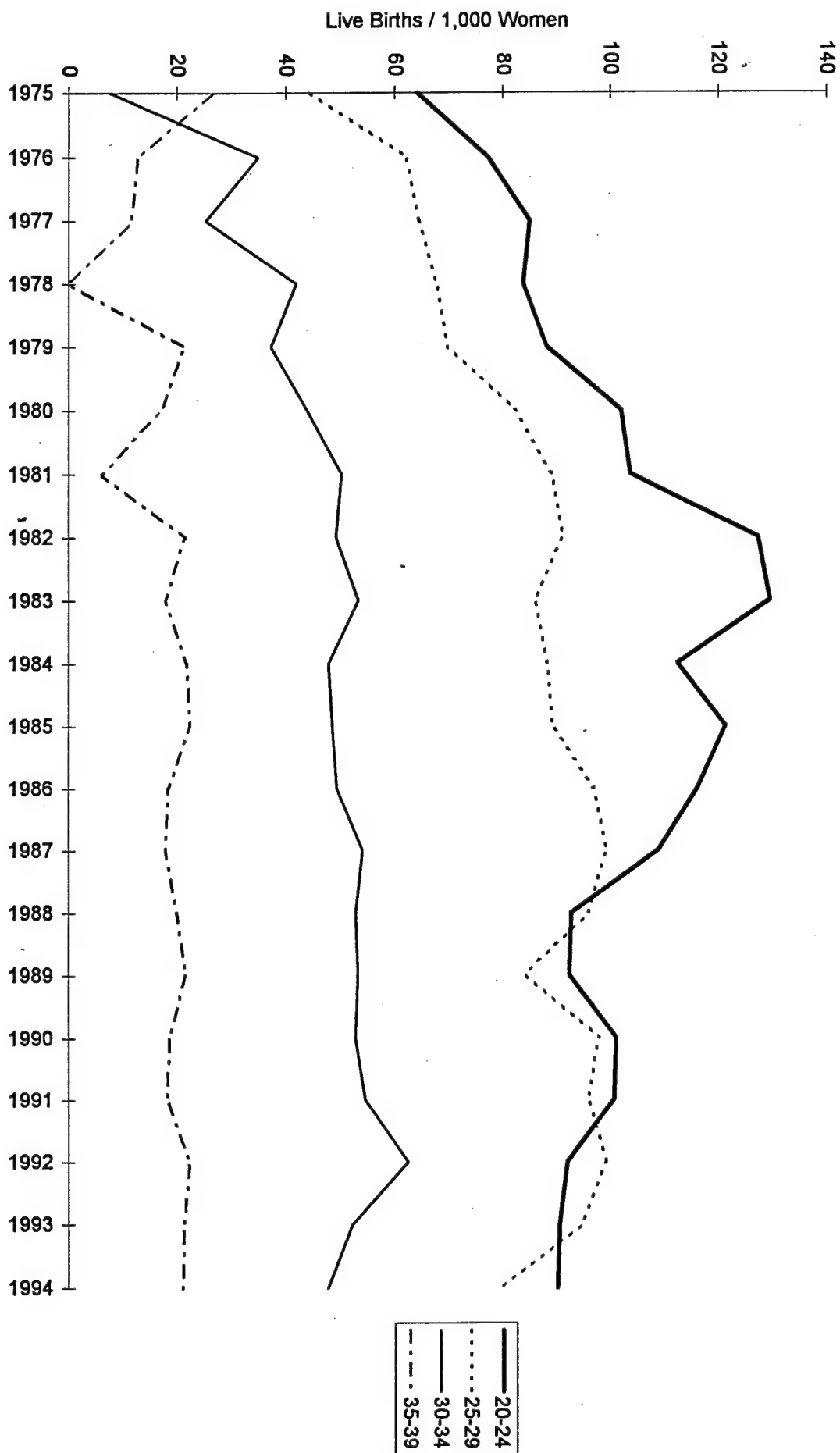


Figure 17c. Live Births per 1000 ADAF Women
Enlisted Grades E7-E9, 1975-1994

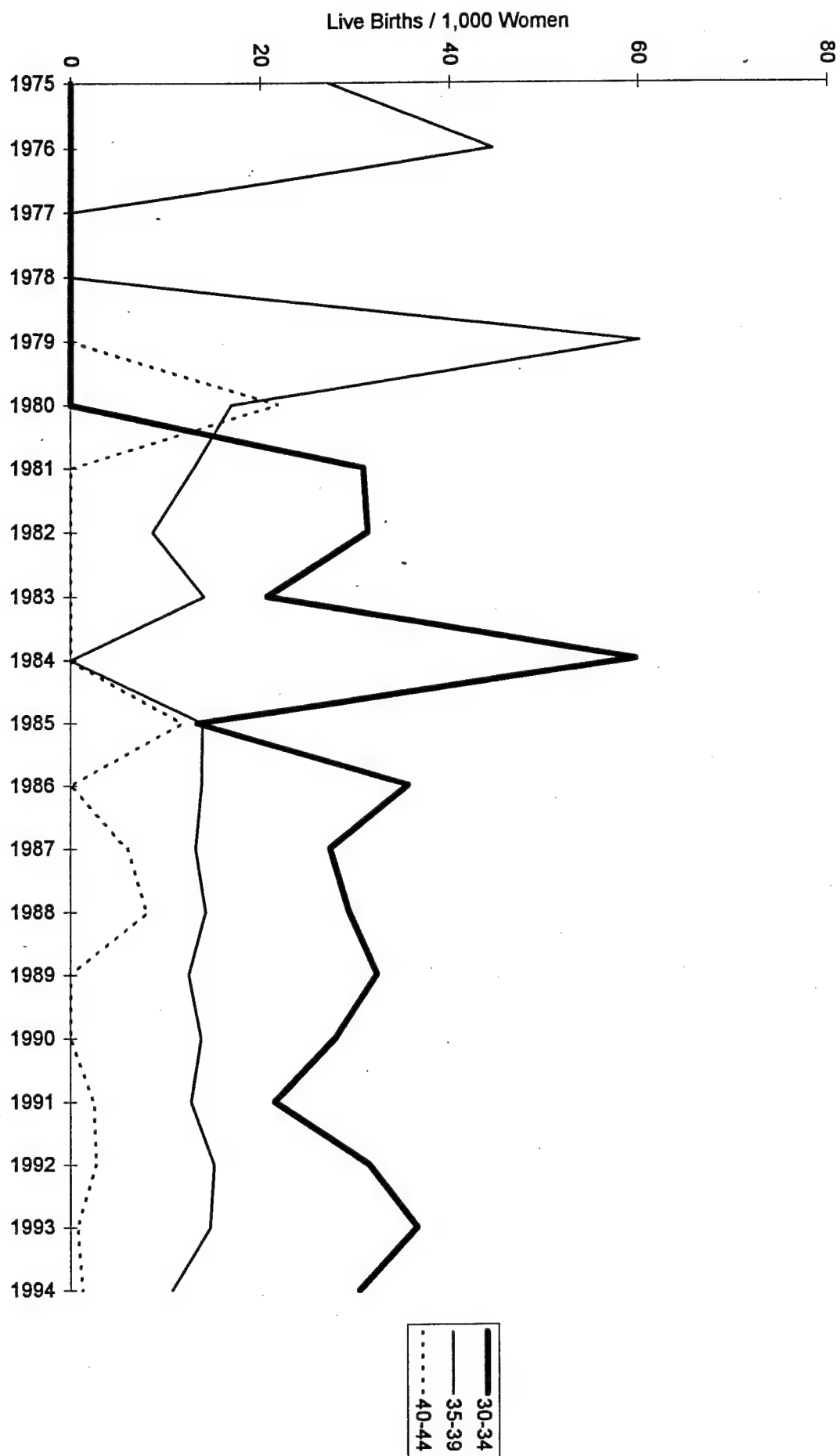
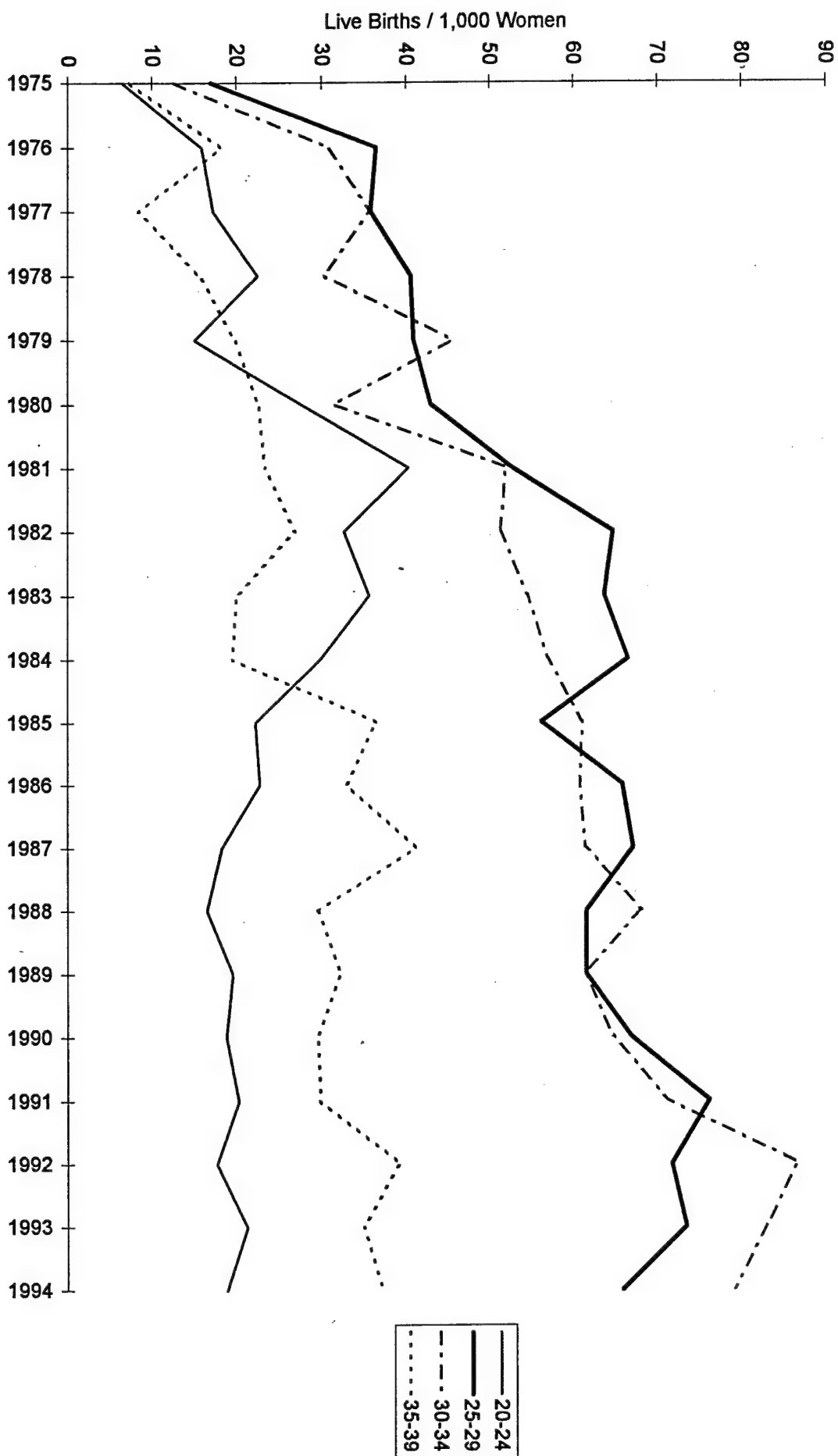
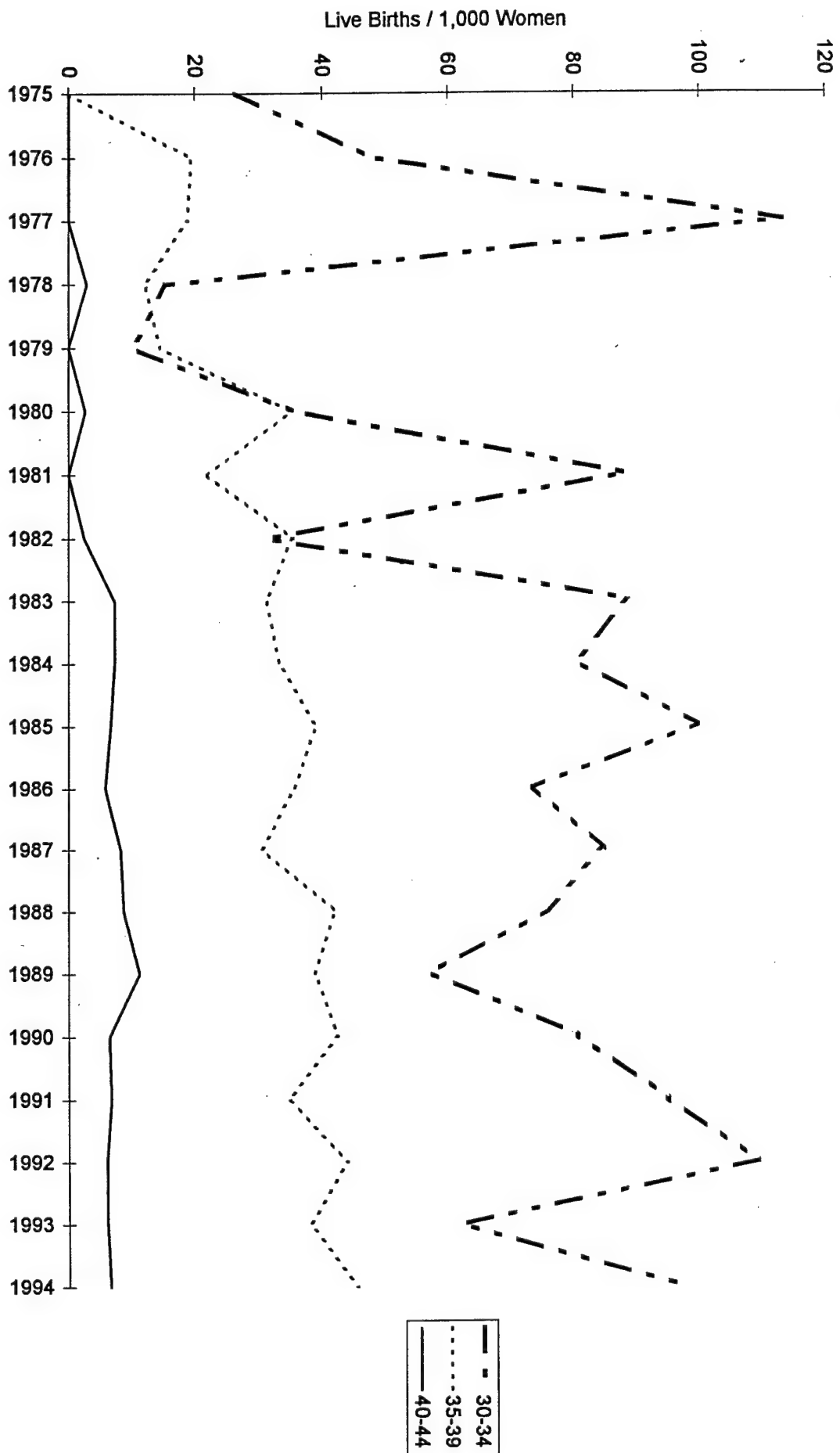


Figure 17d. Live Births per 1000 ADAF Women
Company Grades 01-03, 1975-1994



**Figure 17e. Live Births per 1000 ADAF Women
Field Grades O4+, 1975-1994**



**Figure 17f. Total Fertility Rates for ADAF Women
Officers and Enlisted, 1975-1994**

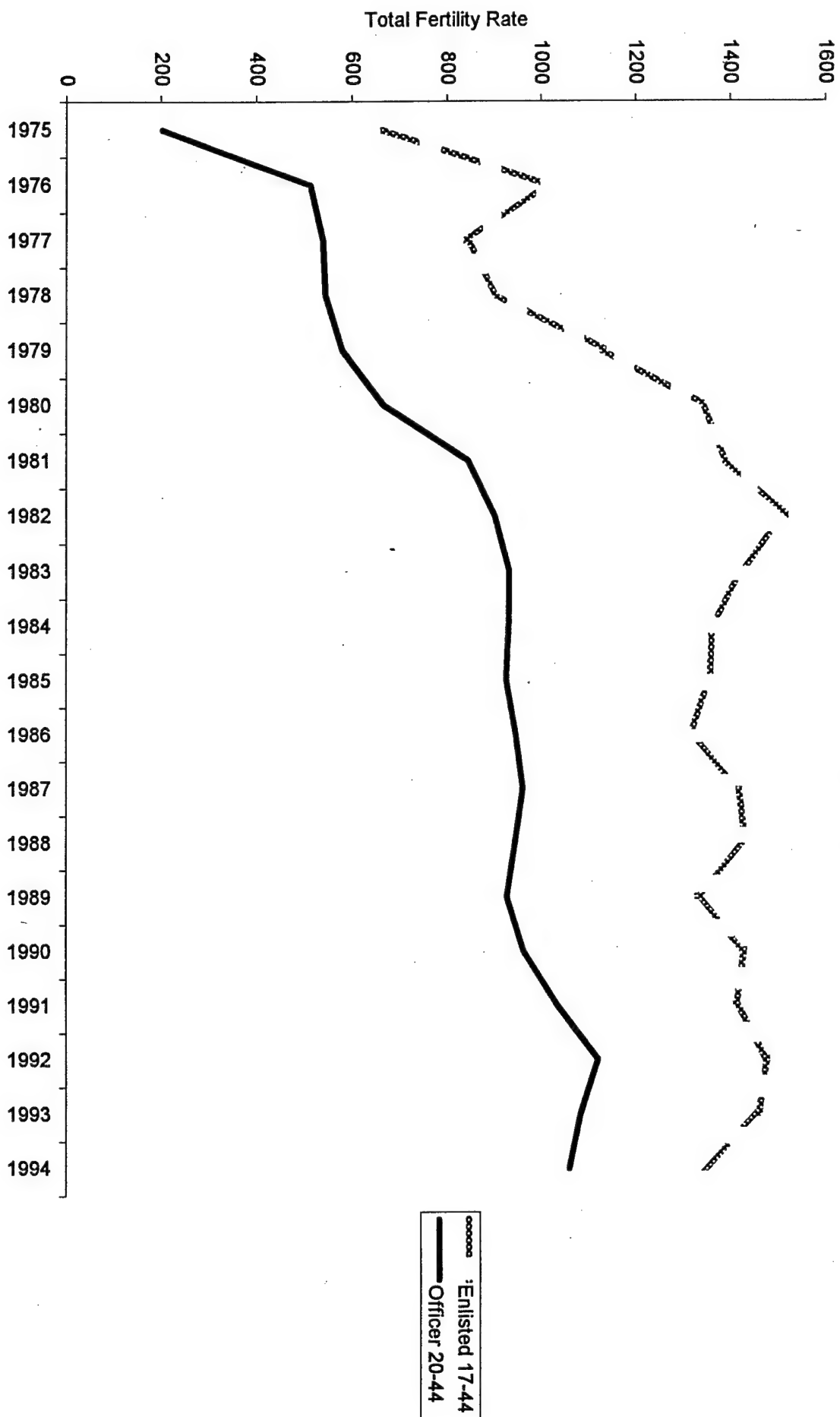


Table 18. Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Enlisted Women by Job Group, 1975-1994

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age Specific Births / 1000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975	Tactical Ops	27.9	512.1	15.5	32.6	26.9	7.0	26.6	0.0	
	Electr/Comm/Intell	37.6	547.1	28.7	45.1	60.1	0.0	—	0.0	
	Health Care	51.6	801.2	86.9	45.2	62.9	0.0	0.0	0.0	
	Funct Supp/Admin	46.5	656.2	28.7	53.6	40.8	19.7	0.0	0.0	
	Repair/Craftsman	32.1	453.1	8.1	56.3	29.5	0.0	0.0	0.0	
	Services/Supply	24.3	306.1	46.3	20.2	13.2	0.0	0.0	0.0	
1976	Other Enlisted	55.6	776.2	53.6	64.4	36.8	6.4	15.4	0.0	
		1.2	402.8	0.0	1.4	2.1	0.0	77.1	0.0	
	Tactical Ops	42.1	740.2	29.9	46.2	40.6	28.9	16.3	0.0	
	Electr/Comm/Intell	91.0	1321.3	124.7	82.9	106.5	0.0	0.0	0.0	
	Health Care	39.8	793.7	26.6	39.0	51.1	52.8	0.0	0.0	
	Funct Supp/Admin	62.5	1293.9	58.5	73.5	39.5	45.6	65.2	0.0	
1977	Repair/Craftsman	42.3	728.2	45.3	46.7	36.0	35.8	0.0	0.0	
	Services/Supply	74.1	1776.2	49.8	72.7	109.5	143.2	0.0	0.0	
	Other Enlisted	66.6	1048.0	61.1	73.7	56.3	26.2	16.8	0.0	
		3.1	51.5	2.3	2.7	6.2	0.0	0.0	0.0	
	Tactical Ops	39.5	622.9	19.3	45.4	42.3	17.8	7.5	0.0	
	Electr/Comm/Intell	54.2	643.1	32.1	62.2	47.1	0.0	0.0	—	
1978	Health Care	30.3	388.3	19.5	34.1	31.9	0.0	0.0	0.0	
	Funct Supp/Admin	62.5	901.5	40.5	69.9	61.6	24.5	0.0	0.0	
	Repair/Craftsman	69.4	1077.8	71.0	80.1	57.3	35.6	0.0	0.0	
	Services/Supply	43.6	501.2	39.6	51.3	25.1	0.0	0.0	—	
	Other Enlisted	65.6	998.7	46.6	74.0	61.8	22.7	13.2	0.0	
		1.2	20.8	0.3	1.2	2.8	0.0	0.0	0.0	
1979	Tactical Ops	38.6	651.0	17.2	43.2	45.2	31.5	0.0	0.0	
	Electr/Comm/Intell	77.9	1166.8	58.0	92.7	44.4	61.5	0.0	0.0	
	Health Care	29.3	528.8	16.8	34.1	27.7	33.8	0.0	—	
	Funct Supp/Admin	59.2	992.4	38.4	65.2	59.5	50.8	0.0	0.0	
	Repair/Craftsman	62.5	1021.5	37.6	66.2	69.8	45.7	0.0	0.0	
	Services/Supply	37.6	433.9	22.0	50.0	23.6	0.0	—	0.0	
1979	Other Enlisted	62.3	962.8	30.7	70.9	67.1	36.1	0.0	0.0	
		0.5	17.5	0.3	1.0	2.3	0.0	0.0	0.0	
	Tactical Ops	59.1	786.1	20.5	45.9	48.2	30.0	20.9	0.0	
	Electr/Comm/Intell	38.5	1011.8	18.8	70.1	67.2	53.7	0.0	0.0	
	Health Care	64.9	635.0	16.5	49.7	30.7	36.7	—	0.0	
	Funct Supp/Admin	62.4	1208.9	33.8	68.9	76.1	42.2	34.3	0.0	
1979	Repair/Craftsman	45.7	1097.2	45.7	66.5	64.0	61.5	0.0	0.0	
	Services/Supply	68.8	574.7	37.9	51.9	40.4	0.0	—	0.0	
	Other Enlisted	0.4	1144.2	38.2	81.3	69.7	32.3	22.6	0.0	
		0.6	5.8	0.7	0.4	0.3	0.0	0.0	0.0	

Table 18. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Enlisted Women by Job Group, 1975-1994

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age Specific Births / 1000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975-1979	Tactical Ops	38.4	693.1	19.9	43.2	42.7	26.9	13.9	0.0	
	Electr/Comm/Intell	63.8	1832.7	38.1	72.5	58.5	41.9	170.8	0.0	
	Health Care	36.1	597.2	22.2	40.4	36.1	29.6	0.0	0.0	
	Funct Supp/Admin	60.1	1054.8	39.6	67.0	59.2	40.1	21.0	0.0	
	Repair/Craftsman	56.3	953.7	34.3	64.8	57.1	48.3	0.0	0.0	
	Services/Supply	44.9	621.4	34.8	51.8	37.3	14.4	0.0	0.0	
1980	Other Enlisted	64.3	1020.4	43.4	73.4	61.7	29.3	13.5	0.0	
		1.2	80.4	0.5	1.2	2.0	1.0	11.6	0.0	
	Tactical Ops	48.4	893.2	24.3	56.0	51.6	30.0	12.8	13.5	
	Electr/Comm/Intell	55.2	2488.9	23.5	66.5	59.9	24.7	332.7	0.0	
	Health Care	51.5	806.6	30.5	59.0	55.5	28.6	0.0	0.0	
	Funct Supp/Admin	76.3	1192.6	40.8	89.7	75.5	48.9	0.0	0.0	
1981	Repair/Craftsman	79.7	1758.5	46.1	100.2	75.8	35.4	49.9	62.6	
	Services/Supply	57.4	896.6	51.9	66.1	37.7	44.4	0.0	0.0	
	Other Enlisted	72.2	1121.5	37.4	88.3	71.7	34.3	7.6	0.0	
		0.4	13.2	0.4	0.6	0.0	1.9	0.0	0.0	
	Tactical Ops	54.5	894.5	40.4	60.1	58.1	31.6	5.0	0.0	
	Electr/Comm/Intell	61.2	926.6	56.6	65.8	59.9	25.7	0.0	0.0	
1982	Health Care	52.1	825.9	43.6	54.1	57.6	27.3	0.0	0.0	
	Funct Supp/Admin	88.8	1409.6	72.5	97.9	95.9	44.6	0.0	0.0	
	Repair/Craftsman	85.2	1551.2	86.3	94.7	90.9	48.2	24.7	0.0	
	Services/Supply	68.0	926.9	46.8	81.0	51.7	24.7	0.0	0.0	
	Other Enlisted	77.6	1242.8	69.1	90.3	75.6	36.4	4.9	0.0	
		0.8	17.7	0.8	0.7	0.8	1.5	0.0	0.0	
1982	Tactical Ops	59.0	984.0	37.5	68.9	59.5	31.5	14.3	0.0	
	Electr/Comm/Intell	79.0	1166.4	65.2	87.5	78.6	28.2	0.0	0.0	
	Health Care	61.1	946.6	38.5	69.0	57.2	40.0	0.0	—	
	Funct Supp/Admin	87.1	1426.6	58.3	104.2	90.4	37.9	17.8	0.0	
	Repair/Craftsman	91.9	1471.7	29.3	116.3	93.9	51.3	15.2	0.0	
	Services/Supply	77.7	1104.0	79.9	86.9	61.1	24.9	0.0	0.0	
1994	Other Enlisted	79.4	1317.5	45.0	98.9	81.9	37.2	18.5	0.0	
		0.4	4.4	0.0	0.4	0.5	0.0	0.0	0.0	

Table 18. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Enlisted Women by Job Group, 1975-1994

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age Specific Births / 1000						
				17-19 years.	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1983	Tactical Ops	54.8	967.9	25.9	65.7	55.2	34.5	10.8	11.9	
	Electr/Comm/Intell	77.1	996.2	32.2	100.8	62.0	17.2	0.0	0.0	
	Health Care	56.8	863.6	43.5	63.4	54.8	28.4	0.0	0.0	
	Funct Supp/Admin	75.3	1288.9	34.8	91.2	78.2	46.9	20.6	0.0	
	Repair/Craftsman	92.3	1541.7	41.8	124.5	89.8	69.0	0.0	0.0	
	Services/Supply	77.2	1155.4	63.3	86.3	65.2	41.6	0.0	—	
1984	Other Enlisted	70.4	1170.8	27.8	89.2	73.9	38.9	15.4	0.0	
		0.5	6.5	0.0	0.6	0.7	0.0	0.0	0.0	
	Tactical Ops	52.2	891.5	30.5	63.3	53.4	31.6	11.7	0.0	
	Electr/Comm/Intell	88.2	1305.2	42.5	120.3	72.5	42.7	0.0	0.0	
	Health Care	51.3	815.2	27.8	56.4	53.7	36.3	0.0	0.0	
	Funct Supp/Admin	67.4	1129.9	37.6	83.0	70.3	41.1	9.0	0.0	
1980-1984	Repair/Craftsman	74.7	1328.5	35.5	103.7	87.7	36.2	16.7	0.0	
	Services/Supply	79.7	1466.4	57.3	101.3	53.2	32.8	71.6	—	
	Other Enlisted	69.2	1207.3	42.5	81.9	79.1	39.8	15.1	0.0	
		0.4	12.6	0.9	0.2	0.4	1.4	0.0	0.0	
	Tactical Ops	53.8	928.3	31.7	62.8	55.6	32.1	11.2	4.9	
	Electr/Comm/Intell	72.3	1121.6	43.6	86.7	67.5	28.8	15.2	0.0	
1985	Health Care	54.6	854.5	36.5	60.5	55.6	32.9	0.0	0.0	
	Funct Supp/Admin	78.8	1293.6	48.0	93.1	82.0	43.3	11.4	0.0	
	Repair/Craftsman	84.7	1519.9	50.3	107.7	88.0	48.9	14.2	14.9	
	Services/Supply	72.3	2825.3	57.9	84.5	54.9	33.1	25.1	332.7	
	Other Enlisted	73.7	1222.8	44.2	89.7	76.4	37.9	14.1	0.0	
		0.5	10.7	0.5	0.5	0.5	0.9	0.0	0.0	
1985	Tactical Ops	53.5	958.6	18.5	67.0	59.8	34.1	13.8	6.1	
	Electr/Comm/Intell	63.1	1078.0	6.8	85.6	64.2	61.7	0.0	0.0	
	Health Care	52.0	1022.0	5.7	58.3	58.3	58.4	26.0	0.0	
	Funct Supp/Admin	76.1	1401.0	42.2	84.3	94.6	46.9	29.1	0.0	
	Repair/Craftsman	66.6	1154.3	13.4	93.5	84.3	41.5	3.6	0.0	
	Services/Supply	60.9	963.2	24.6	78.2	60.5	32.5	6.6	0.0	
	Other Enlisted	65.9	1189.4	27.6	85.4	73.5	34.5	16.2	11.7	
		0.5	12.1	0.0	0.2	0.6	1.6	0.0	0.0	

Table 18. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Enlisted Women by Job Group, 1975-1994

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age Specific Births / 1000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1986	Tactical Ops	51.3	933.5	19.0	62.4	53.7	32.0	13.6	3.6	
	Electr/Comm/Intell	49.6	836.0	22.0	60.8	70.8	22.3	0.0	0.0	
	Health Care	53.5	1175.2	24.9	52.7	67.3	51.3	48.8	0.0	
	Funct Supp/Admin	66.2	1141.6	29.1	76.5	81.1	39.6	13.7	0.0	
	Repair/Craftsman	67.7	1260.0	39.2	84.2	104.2	29.1	11.0	0.0	
1987	Services/Supply	54.5	942.1	23.1	68.4	62.6	30.4	13.1	0.0	
	Other Enlisted	66.2	1206.3	23.6	84.8	79.8	40.2	15.1	7.3	
		1.5	29.7	0.0	1.3	2.4	2.3	0.0	0.0	
	Tactical Ops	55.1	997.1	20.9	69.2	67.4	36.2	11.7	2.3	
	Electr/Comm/Intell	53.7	1075.3	17.1	63.7	72.7	59.6	8.8	0.0	
1988	Health Care	55.9	1011.2	29.1	69.1	55.5	47.5	12.7	0.0	
	Funct Supp/Admin	70.5	1242.9	22.7	84.5	95.0	40.4	15.1	0.0	
	Repair/Craftsman	65.7	1325.2	55.6	85.2	98.5	33.3	14.6	0.0	
	Services/Supply	51.6	949.5	26.8	61.0	58.2	39.7	15.0	0.0	
	Other Enlisted	70.6	1263.8	28.2	91.9	84.1	43.2	11.9	4.9	
1989		0.6	10.9	0.0	1.1	0.4	0.7	0.0	0.0	
	Tactical Ops	52.6	978.5	24.1	67.8	63.2	34.5	12.6	3.2	
	Electr/Comm/Intell	56.5	976.2	38.9	67.9	65.2	32.4	6.4	0.0	
	Health Care	51.1	884.0	21.7	59.8	62.0	36.5	5.4	0.0	
	Funct Supp/Admin	67.4	1324.7	21.9	87.0	76.8	49.5	16.5	22.0	
1989	Repair/Craftsman	47.6	997.5	29.3	65.9	65.7	37.5	12.8	0.0	
	Services/Supply	34.6	629.2	15.3	39.4	47.0	18.5	11.8	0.0	
	Other Enlisted	64.6	1180.4	35.1	88.2	73.8	39.3	13.7	0.0	
		2.7	66.9	0.0	1.5	6.0	5.8	0.0	0.0	
	Tactical Ops	55.0	1046.1	24.5	73.0	65.0	40.3	16.3	0.0	
1989	Electr/Comm/Intell	68.2	1310.9	41.1	77.9	77.6	59.4	22.6	0.0	
	Health Care	58.9	1161.3	19.5	70.2	86.1	58.5	25.8	0.0	
	Funct Supp/Admin	69.0	1229.5	22.7	93.3	81.9	42.3	14.8	0.0	
	Repair/Craftsman	50.7	1092.2	12.2	76.6	70.0	42.2	22.3	0.0	
	Services/Supply	34.8	649.9	22.5	44.3	39.0	24.0	9.2	0.0	
1989	Other Enlisted	63.5	1216.3	33.0	87.5	74.1	46.3	15.6	0.0	
		6.4	185.2	1.5	10.6	6.7	0.0	18.9	0.0	

Table 18. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Enlisted Women by Job Group, 1975-1994

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age Specific Births / 1000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1985-1989										
Tactical Ops	53.5	55.1	979.1	21.3	67.8	63.8	35.6	13.8	2.0	
Electr/Comm/Intell	58.3	68.3	1068.6	25.7	70.8	70.1	46.8	10.6	0.0	
Health Care	54.3	58.9	1037.6	20.6	62.1	61.8	50.1	21.2	0.0	
Funct Supp/Admin	69.8	69.1	1262.7	27.1	85.1	85.8	43.7	16.8	5.0	
Repair/Craftsman	58.8	50.7	1174.6	29.7	80.8	84.4	36.9	14.9	0.0	
Services/Supply	43.6	34.8	776.0	21.7	53.9	50.8	26.5	11.0	0.0	
Other Enlisted	66.2	63.6	1199.5	29.2	87.5	77.0	40.9	14.4	2.6	
	1.4	6.4	35.3	0.2	1.5	1.8	1.7	1.9	0.0	
1990										
Tactical Ops	59.8	59.9	1160.6	27.5	80.2	78.7	40.2	13.7	2.9	
Electr/Comm/Intell	68.8	68.7	1150.3	24.3	92.1	77.1	37.2	9.1	0.0	
Health Care	58.3	58.4	1124.4	15.5	65.3	77.4	56.0	16.9	0.0	
Funct Supp/Admin	74.8	75.0	1456.7	34.4	92.9	95.7	49.3	27.7	5.2	
Repair/Craftsman	56.0	56.1	1329.5	51.3	82.9	81.1	57.8	13.4	0.0	
Services/Supply	40.5	40.5	785.1	23.0	59.1	48.2	19.5	10.2	6.3	
Other Enlisted	69.2	69.3	1357.3	40.1	97.2	91.9	43.3	11.9	3.2	
	3.7	3.7	97.3	0.0	2.9	12.5	4.1	0.0	0.0	
1991										
Tactical Ops	57.8	58.0	1159.0	26.0	76.3	80.5	41.0	14.0	4.4	
Electr/Comm/Intell	57.2	57.3	1163.3	26.6	64.6	78.6	52.0	21.6	0.0	
Health Care	59.1	59.2	1116.7	34.8	64.4	89.5	39.8	8.8	0.0	
Funct Supp/Admin	78.8	78.9	1490.5	25.4	101.9	104.7	49.1	19.2	8.0	
Repair/Craftsman	49.4	49.7	1216.6	32.3	91.1	77.9	40.6	11.7	2.7	
Services/Supply	41.0	41.0	825.4	24.2	54.2	59.4	25.0	8.1	3.8	
Other Enlisted	64.3	64.5	1321.3	35.3	88.4	84.8	48.2	16.4	5.2	
	5.7	5.7	133.5	0.0	7.9	4.8	14.0	0.0	0.0	
1992										
Tactical Ops	57.0	57.2	1176.1	22.7	76.1	80.3	47.3	15.2	2.7	
Electr/Comm/Intell	78.4	78.4	1461.9	42.4	96.4	85.5	71.2	13.9	0.0	
Health Care	55.1	55.2	1171.9	19.9	57.0	79.4	63.7	12.3	10.0	
Funct Supp/Admin	72.2	72.4	1451.1	29.4	88.8	97.0	61.0	22.7	3.2	
Repair/Craftsman	45.0	45.6	1125.9	23.5	64.9	75.4	53.3	17.5	0.0	
Services/Supply	39.4	39.5	817.7	26.8	53.2	57.8	24.7	11.7	0.0	
Other Enlisted	58.8	59.1	1208.0	18.1	82.8	83.0	46.8	14.2	4.0	
	14.7	14.7	1035.6	0.0	16.3	131.9	58.9	0.0	0.0	

Table 18. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Enlisted Women by Job Group, 1975-1994

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age Specific Births / 1000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1993										
Tactical Ops	54.8	55.1	1139.0	34.5	74.8	75.6	40.8	15.5	0.4	
Electr/Comm/Intell	43.1	43.2	782.2	20.5	61.6	42.5	22.1	18.0	0.0	
Health Care	120.6	120.8	2542.6	124.5	133.5	156.8	80.2	63.4	0.0	
Funct Supp/Admin	77.5	77.8	1570.8	57.5	93.8	102.6	58.3	25.0	0.0	
Repair/Craftsman	136.4	140.7	4767.9	243.8	425.4	272.1	83.2	26.6	0.0	
Services/Supply	37.1	37.1	792.6	32.8	48.7	51.0	27.7	11.4	0.0	
Other Enlisted	45.8	46.1	970.4	24.6	65.4	66.1	36.9	10.1	0.8	
	9.7	9.7	636.7	0.0	5.5	55.3	66.5	0.0	0.0	
1994										
Tactical Ops	45.7	46.1	995.9	47.6	61.5	58.5	35.2	13.0	2.4	
Electr/Comm/Intell	34.5	34.7	727.4	13.0	41.8	36.3	39.7	13.8	6.1	
Health Care	72.9	72.9	1514.1	59.1	76.5	105.3	55.8	29.7	0.0	
Funct Supp/Admin	63.5	63.9	1304.6	73.0	79.7	78.7	40.7	13.6	4.4	
Repair/Craftsman	84.9	88.6	2993.3	134.8	191.4	221.4	75.2	20.5	9.3	
Services/Supply	35.1	35.2	827.3	59.6	49.5	38.8	28.5	10.5	2.5	
Other Enlisted	38.9	39.3	877.7	47.5	56.7	50.9	28.3	10.6	0.7	
	67.2	68.0	1821.3	25.0	74.9	99.5	139.9	34.9	0.0	
1990-1994										
Tactical Ops	55.2	55.4	1122.8	30.1	73.9	75.0	40.9	14.3	2.4	
Electr/Comm/Intell	53.5	53.7	1009.9	25.4	68.9	58.2	41.8	15.6	2.2	
Health Care	67.1	67.2	1348.4	34.9	72.8	93.8	56.7	22.4	3.0	
Funct Supp/Admin	73.3	73.5	1438.8	40.6	91.3	95.5	51.5	21.4	3.8	
Repair/Craftsman	60.0	60.7	1545.2	51.5	107.5	97.7	54.9	16.1	2.0	
Services/Supply	38.8	38.9	800.0	30.3	53.5	51.3	24.7	10.4	2.0	
Other Enlisted	54.8	55.1	1133.2	30.9	77.5	75.6	40.3	12.5	2.3	
	17.1	17.2	512.7	2.8	18.4	33.5	37.6	11.3	0.0	

Table 18. (cont'd.) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate, and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Enlisted Women by Job Group, 1975-1994										
Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age Specific Births / 1000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975-1994	51.4	51.5	956.3	25.3	62.0	61.2	36.6	13.9	2.4	
Tactical Ops	59.9	60.0	1074.2	30.4	74.0	64.2	41.6	14.8	2.0	
Electr/Comm/Intell	54.6	54.7	1068.1	27.9	59.5	64.6	49.6	20.8	2.4	
Health Care	71.5	71.7	1305.5	38.3	85.4	83.5	46.4	19.1	3.7	
Funct Supp/Admin	65.0	65.3	1305.3	39.2	90.1	84.5	45.6	15.4	1.9	
Repair/Craftsman	44.9	45.0	838.9	32.2	59.0	51.0	25.6	10.6	2.3	
Services/Supply	64.5	64.6	1171.1	37.2	82.9	74.1	39.5	13.2	2.2	
Other Enlisted	1.6	1.7	56.2	0.6	1.5	2.1	3.4	3.8	0.0	

Figure 18a. Live Births per 1000 ADAF Enlisted Women
Tactical Ops, 1975-1994.

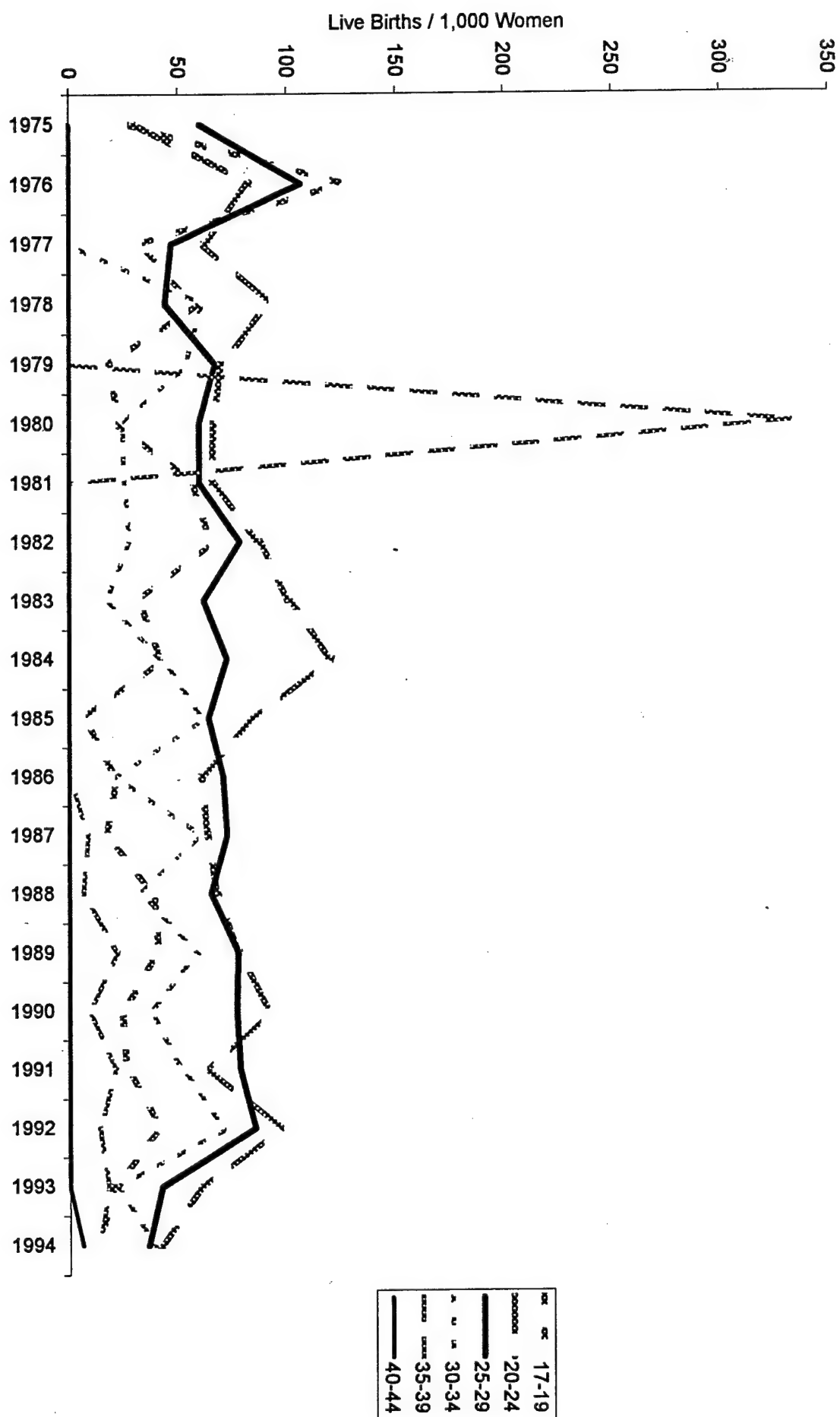


Figure 18b. Live Births per 1000 ADAF Enlisted Women
Electron/Comm/Intell, 1975-1994

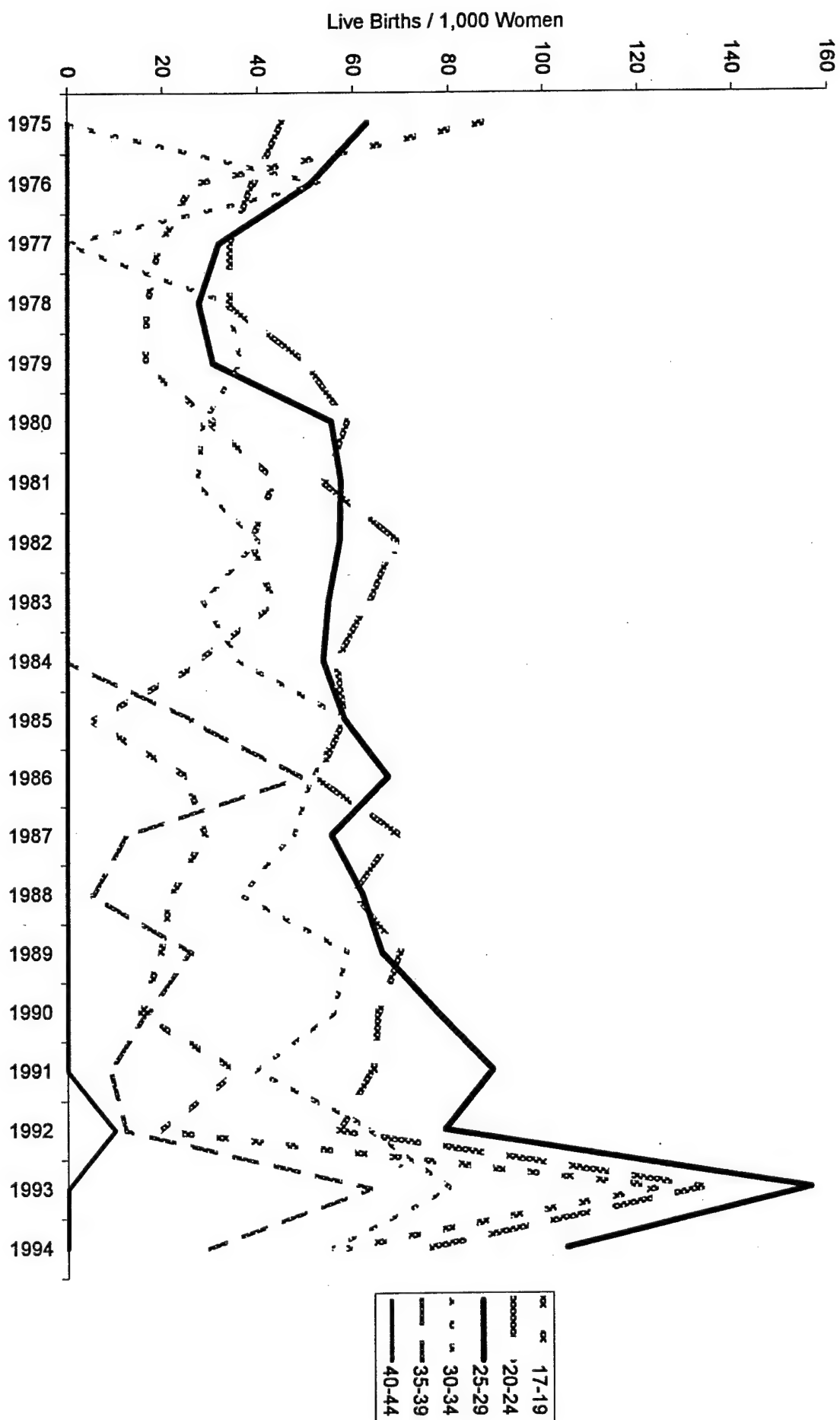
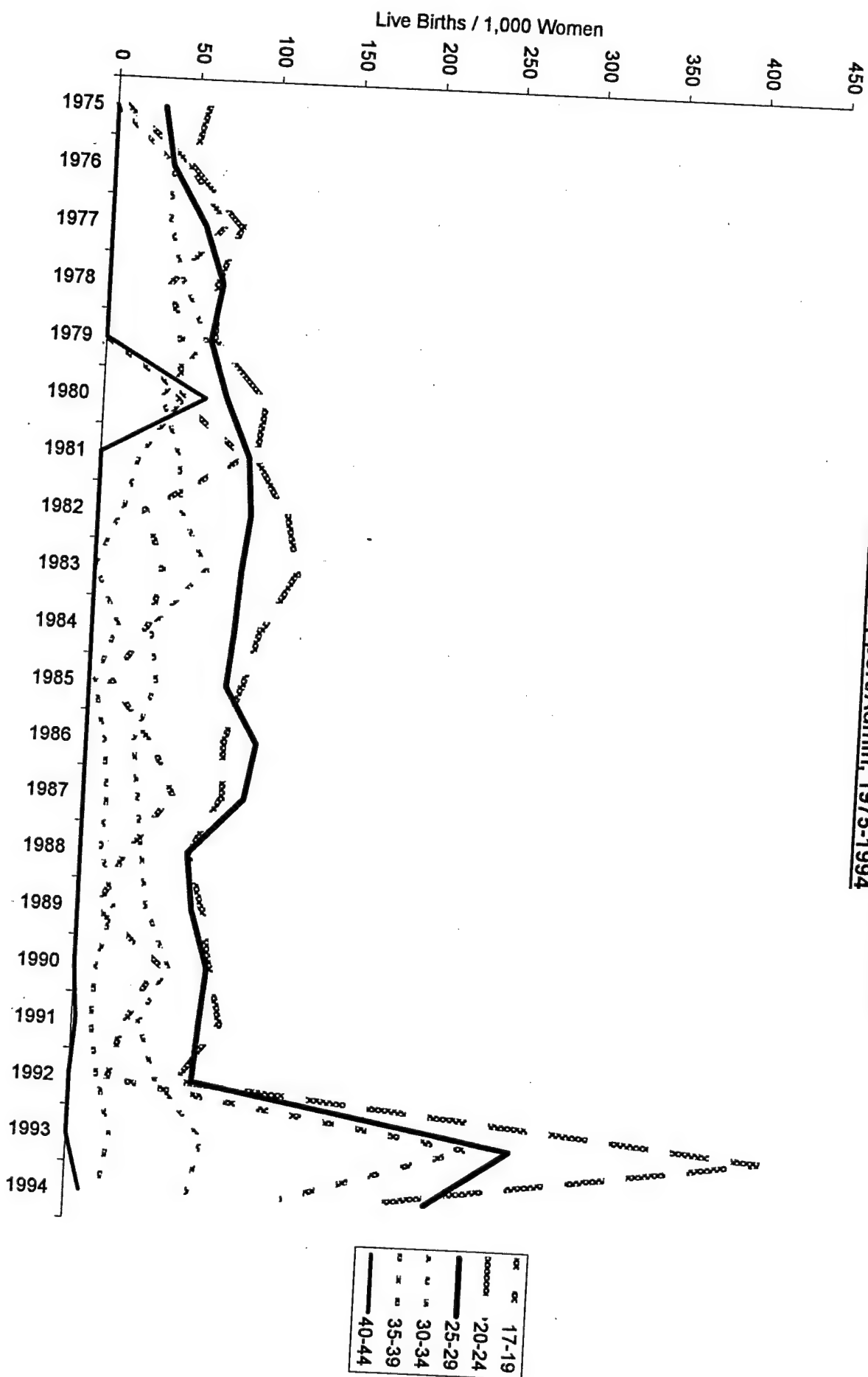


Figure 18c. Live Births per 1000 ADAF Enlisted Women
Health Care, 1975-1994



Figure 18d. Live Births per 1000 ADAF Enlisted Women
Funct Support/Admin., 1975-1994



**Figure 18e. Live Births per 1000 ADAF Enlisted Women
Repair/Craftsman, 1975-1994**

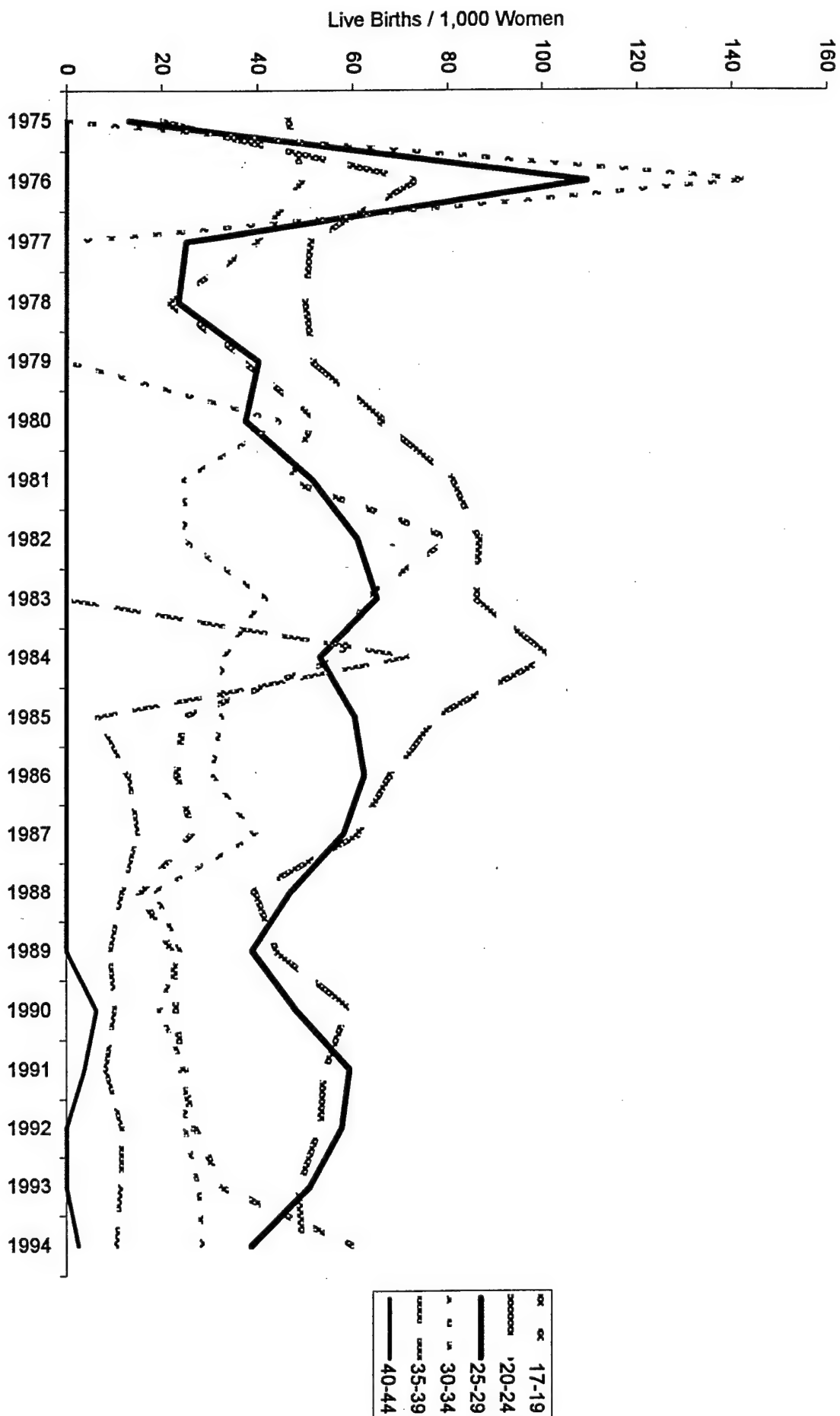
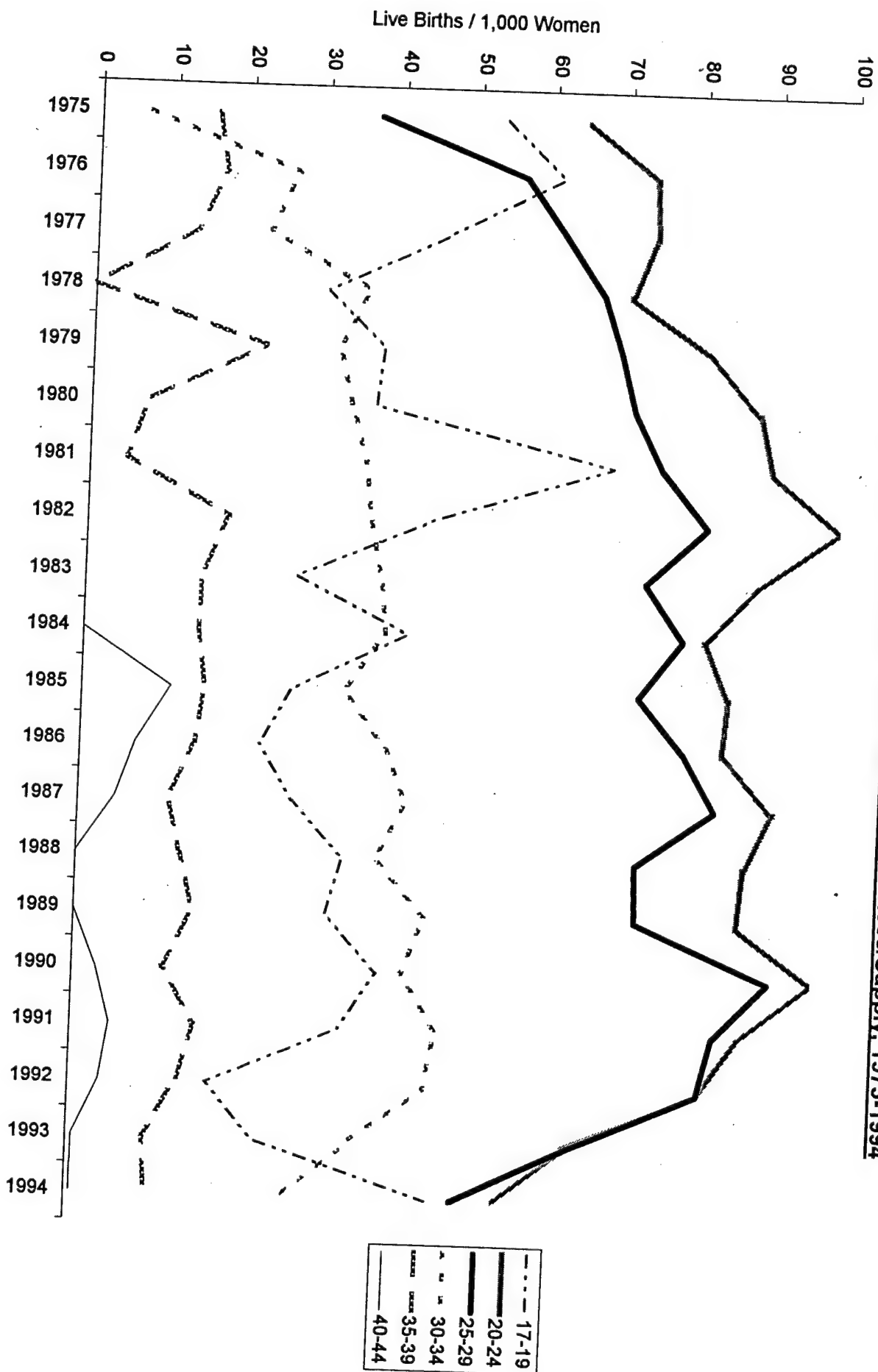


Figure 18f. Live Births per 1000 ADAF Enlisted Women Services/Supply, 1975-1994



**Figure 18g. Total Fertility Rates for ADAF Enlisted Women
by Job Group, 1975-1994**

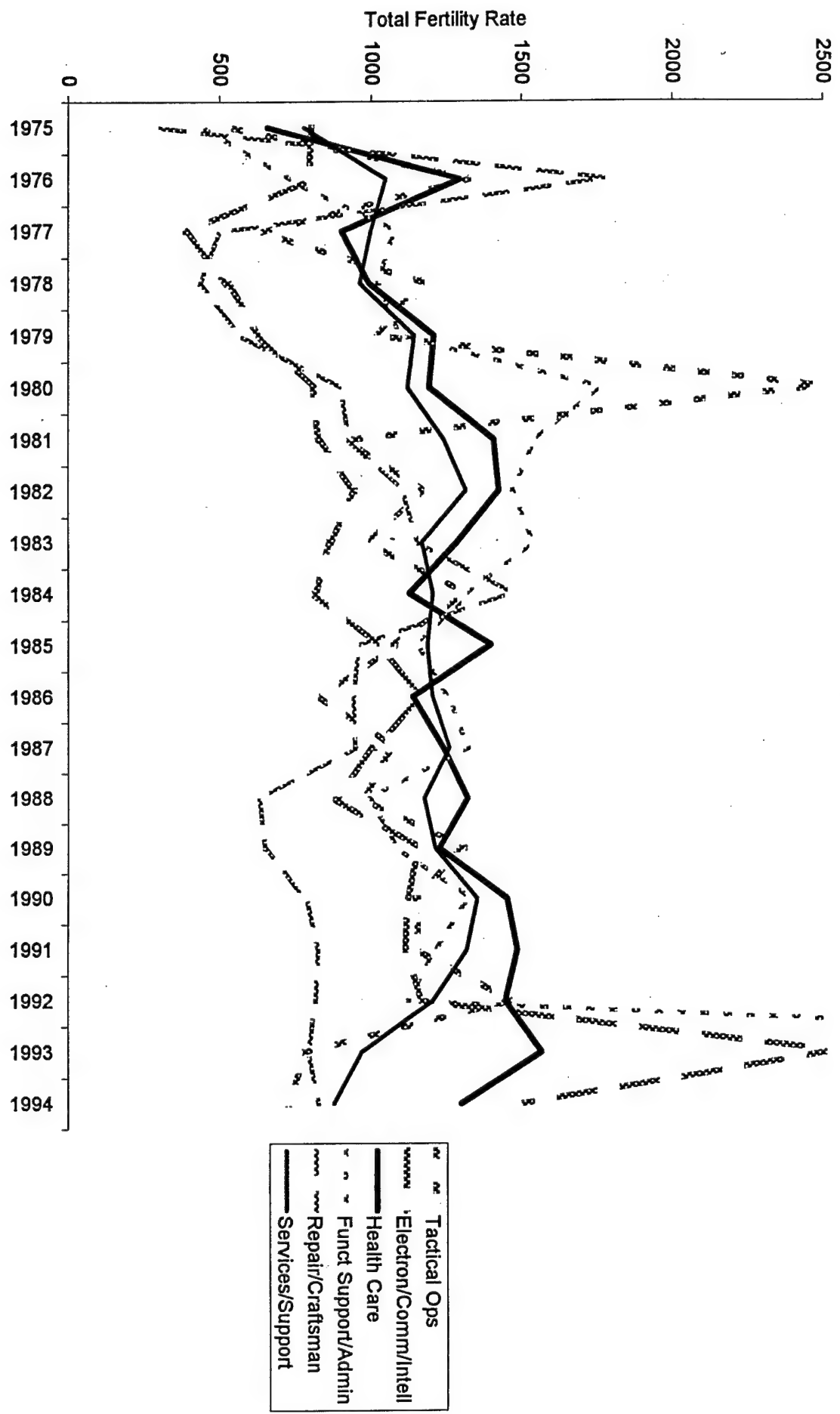


Table 19. Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Women Officers, by Job Group, 1975-1994

Total Fertility Rate calculated from available data											
Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age-Specific Births / 1,000							
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years		
1975	8.0	8.7	169.2	0.0	5.5	12.5	12.0	3.8	0.0	0.0	
	11.1	12.0	133.9	0.0	10.9	15.9	0.0	0.0	0.0	0.0	
	4.9	5.0	105.3	0.0	21.1	0.0	0.0	0.0	0.0	0.0	
	9.2	10.2	209.2	0.0	5.8	17.3	16.6	2.2	0.0	0.0	
	9.0	9.3	196.3	0.0	0.0	12.9	6.1	20.3	0.0	0.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1976	19.8	21.3	438.1	0.0	15.9	27.3	29.4	0.0	0.0	0.0	
	27.4	27.4	1944.4	0.0	8.8	46.0	0.0	15.0	0.0	0.0	
	17.8	17.9	284.0	0.0	18.9	17.0	20.9	334.1	0.0	0.0	
	20.8	23.0	493.4	0.0	19.2	31.5	34.5	13.5	0.0	0.0	
	20.6	21.2	421.6	0.0	19.3	19.6	28.7	16.7	0.0	0.0	
	27.8	29.5	1675.9	0.0	0.0	0.0	335.2	0.0	0.0	0.0	
	62.6	83.5	1667.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	4.5	4.6	48.6	0.0	0.0	9.7	0.0	0.0	0.0	0.0	
1977	23.5	25.1	508.3	0.0	14.0	33.2	37.5	14.4	2.5	2.5	
	26.8	26.9	286.7	0.0	21.8	35.5	0.0	0.0	0.0	0.0	
	21.8	21.9	326.5	0.0	22.3	25.0	17.9	0.0	0.0	0.0	
	27.0	29.8	641.1	0.0	11.7	38.2	57.7	17.7	2.9	2.9	
	25.1	25.5	412.4	0.0	23.1	43.3	16.1	0.0	0.0	0.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	27.9	32.3	1001.8	0.0	0.0	200.4	0.0	0.0	0.0	0.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1978	23.7	25.1	481.4	0.0	19.4	34.6	26.1	13.7	0.0	0.0	
	9.6	9.6	90.0	0.0	0.0	18.0	0.0	0.0	0.0	0.0	
	32.9	33.1	554.3	0.0	16.6	37.5	56.8	0.0	0.0	0.0	
	26.4	29.0	582.5	0.0	23.5	41.2	33.4	15.5	2.9	2.9	
	29.7	30.1	541.6	0.0	40.4	37.4	18.7	11.8	0.0	0.0	
	17.0	17.3	142.7	0.0	0.0	28.5	0.0	0.0	0.0	0.0	
	40.7	45.5	1664.7	0.0	0.0	332.9	0.0	0.0	0.0	0.0	
	3.0	3.0	35.9	0.0	0.0	7.2	0.0	0.0	0.0	0.0	

Table 19. (cont'd) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Women Officers, by Job Group, 1976-1994

'-' denotes incongruity among data prohibiting valid rate calculations; Total Fertility Rate calculated from available data

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age-Specific Births / 1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1982										
Tactical Ops	39.7	41.1	766.8	0.0	27.6	52.4	44.8	26.3	2.2	
Intell/Enginr/Maint	33.4	33.5	500.0	0.0	28.4	38.4	33.2	0.0	0.0	
Health Care	50.2	50.2	809.3	0.0	34.0	65.8	45.5	16.6	0.0	
Supply/Procmt	47.3	50.9	975.1	0.0	23.7	68.1	66.1	34.3	2.8	
Scientist/Prof	46.0	46.3	890.6	0.0	62.5	56.5	36.3	22.7	0.0	
Admin/Executive	28.4	28.4	466.6	0.0	16.2	45.4	31.8	0.0	0.0	
Other Officer	58.2	60.9	1123.2	0.0	38.6	90.7	95.3	0.0	0.0	
	0.8	0.8	48.4	0.0	0.0	0.0	0.0	9.7	0.0	
1983										
Tactical Ops	28.8	29.7	559.8	0.0	22.3	37.2	33.6	14.6	4.1	
Intell/Enginr/Maint	28.2	28.2	486.2	0.0	38.2	21.7	37.3	0.0	0.0	
Health Care	48.3	48.4	763.0	0.0	33.5	68.0	39.1	12.0	0.0	
Supply/Procmt	45.3	48.2	923.3	0.0	28.1	67.8	59.6	23.8	5.4	
Scientist/Prof	0.9	0.9	44.6	0.0	8.9	0.0	0.0	0.0	0.0	
Admin/Executive	39.9	39.9	808.5	0.0	14.8	28.9	77.8	40.2	0.0	
Other Officer	49.1	51.2	1213.7	0.0	38.0	56.5	64.4	83.8	0.0	
	1.4	1.4	18.1	0.0	0.0	3.6	0.0	0.0	0.0	
1984										
Tactical Ops	37.3	38.5	729.7	0.0	20.3	49.5	46.6	23.4	6.1	
Intell/Enginr/Maint	34.7	34.7	643.0	0.0	41.9	34.0	33.8	18.9	0.0	
Health Care	48.0	46.2	811.7	0.0	20.0	60.6	56.3	25.4	0.0	
Supply/Procmt	47.1	50.2	976.5	0.0	18.0	64.3	67.1	40.1	5.7	
Scientist/Prof	38.9	39.2	742.8	0.0	48.7	60.8	33.6	5.7	0.0	
Admin/Executive	45.3	45.5	776.8	0.0	20.3	61.3	47.4	26.3	0.0	
Other Officer	35.7	37.2	1200.1	0.0	0.0	46.0	110.5	0.0	83.5	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1980-1984										
Tactical Ops	34.1	35.2	675.1	0.0	24.4	44.0	39.9	22.4	4.4	
Intell/Enginr/Maint	28.6	28.6	492.6	0.0	30.4	27.1	33.9	7.2	0.0	
Health Care	42.8	42.9	752.5	0.0	25.9	54.8	45.1	24.7	0.0	
Supply/Procmt	44.3	47.6	927.4	0.0	25.9	64.3	58.6	31.7	5.0	
Scientist/Prof	31.8	32.0	600.8	0.0	44.5	40.1	25.3	10.2	0.0	
Admin/Executive	35.4	35.5	639.9	0.0	15.4	40.6	52.2	19.8	0.0	
Other Officer	44.5	46.3	1268.7	0.0	28.2	50.9	107.2	38.8	28.6	
	0.8	0.8	17.3	0.0	0.0	1.5	0.0	2.0	0.0	

Table 19. (cont'd) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Women Officers, by Job Group, 1975-1994

'—' denotes incongruity among data prohibiting valid rate calculations; Total Fertility Rate calculated from available data

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age-Specific Births / 1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1985										
Tactical Ops	39.0	40.1	769.7	0.0	15.3	47.5	55.5	32.0	3.6	
Intell/Enginr/Maint	24.5	24.5	380.2	0.0	4.1	25.2	46.8	0.0	0.0	
Health Care	32.7	32.8	634.4	0.0	17.5	39.2	44.2	26.0	0.0	
Supply/Procmt	48.1	50.9	979.9	0.0	15.8	63.2	69.9	44.4	2.7	
Scientist/Prof	43.5	43.7	853.1	0.0	29.0	56.9	52.4	21.7	10.6	
Admin/Executive	45.0	45.3	842.4	0.0	21.2	54.0	48.7	44.5	0.0	
Other Officer	38.6	39.8	1067.6	0.0	0.0	56.7	65.7	91.1	0.0	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1986										
Tactical Ops	39.5	40.6	738.6	0.0	19.8	52.1	51.4	27.4	3.1	
Intell/Enginr/Maint	35.5	35.6	656.0	0.0	35.2	38.1	37.0	20.9	0.0	
Health Care	30.9	31.0	539.8	0.0	21.6	34.2	40.9	23.3	0.0	
Supply/Procmt	44.7	47.4	901.0	0.0	21.1	65.6	59.7	28.6	5.2	
Scientist/Prof	39.5	39.8	727.8	0.0	9.0	60.4	46.7	29.5	0.0	
Admin/Executive	29.7	29.8	637.4	0.0	23.2	25.3	37.6	41.4	0.0	
Other Officer	41.2	42.5	828.5	0.0	9.3	77.0	50.2	29.2	0.0	
	42.4	43.3	749.4	0.0	9.6	48.4	78.2	13.6	0.0	
1987										
Tactical Ops	42.3	43.5	826.8	0.0	14.8	58.9	52.7	31.2	7.8	
Intell/Enginr/Maint	30.1	30.1	634.2	0.0	3.4	31.2	47.2	45.0	0.0	
Health Care	30.8	31.0	557.2	0.0	22.7	40.4	35.0	13.4	0.0	
Supply/Procmt	52.9	55.7	1070.8	0.0	16.1	78.2	67.1	40.8	11.9	
Scientist/Prof	36.2	36.7	700.6	0.0	11.5	63.0	44.2	15.2	6.2	
Admin/Executive	20.9	21.0	302.0	0.0	0.0	27.6	32.8	0.0	0.0	
Other Officer	57.3	59.6	1277.7	0.0	14.5	72.4	93.8	74.8	0.0	
	56.0	57.2	1155.6	0.0	28.2	84.2	41.0	77.7	0.0	
1988										
Tactical Ops	39.8	41.0	785.0	0.0	14.0	50.8	57.8	27.5	7.0	
Intell/Enginr/Maint	29.7	29.9	573.2	0.0	10.7	28.9	50.1	25.0	0.0	
Health Care	31.0	31.2	541.6	0.0	8.6	42.5	40.3	16.9	0.0	
Supply/Procmt	47.8	50.8	981.3	0.0	14.8	61.1	75.6	33.1	11.7	
Scientist/Prof	34.7	35.1	697.0	0.0	16.9	59.6	43.2	19.8	0.0	
Admin/Executive	17.2	17.3	346.5	0.0	0.0	6.5	32.0	30.7	0.0	
Other Officer	43.5	46.1	862.4	0.0	49.9	54.3	68.3	0.0	0.0	
	63.1	63.6	1336.8	0.0	14.4	87.6	57.8	74.9	32.6	

Table 19. (cont'd) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Women Officers, by Job Group, 1976-1994

'-' denotes incongruity among data prohibiting valid rate calculations; Total Fertility Rate calculated from available data

	Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age-Specific Births / 1,000							
					17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years		
1989												
	Tactical Ops	42.1	43.7	882.4	0.0	17.7	57.9	55.4	33.3	12.1		
	Intell/Enginr/Maint	36.2	36.4	695.1	0.0	19.6	38.0	55.8	25.6	0.0		
	Health Care	37.4	37.6	714.1	0.0	16.8	57.8	41.8	13.0	13.4		
	Supply/Procmt	44.1	47.5	946.8	0.0	13.1	64.8	59.3	38.2	14.0		
	Scientist/Prof	34.6	35.3	695.8	0.0	0.0	56.3	50.5	24.4	7.9		
	Admin/Executive	40.2	40.8	780.4	0.0	0.0	45.9	44.2	66.0	0.0		
	Other Officer	59.7	62.3	1407.6	0.0	57.6	63.2	93.8	66.9	0.0		
		81.6	81.8	1964.3	0.0	78.2	81.1	82.8	97.9	52.8		
1985-1989												
	Tactical Ops	40.6	41.8	811.0	0.0	16.4	53.5	54.6	30.4	7.4		
	Intell/Enginr/Maint	31.4	31.5	600.7	0.0	14.3	32.4	47.6	25.8	0.0		
	Health Care	32.6	32.8	614.6	0.0	17.9	42.6	40.3	17.7	4.4		
	Supply/Procmt	47.5	50.4	978.2	0.0	16.3	66.7	66.3	36.8	9.5		
	Scientist/Prof	37.7	38.1	735.2	0.0	13.7	59.2	47.3	22.0	4.8		
	Admin/Executive	30.4	30.6	587.8	0.0	9.4	31.7	36.5	37.9	0.0		
	Other Officer	48.5	50.5	1075.0	0.0	21.8	64.7	76.5	52.0	0.0		
		46.9	47.6	1025.0	0.0	23.5	57.3	51.4	52.1	20.7		
1990												
	Tactical Ops	45.2	46.7	924.2	0.0	17.4	64.0	63.3	35.4	4.7		
	Intell/Enginr/Maint	36.1	36.4	729.3	0.0	8.2	44.3	31.4	62.0	0.0		
	Health Care	46.6	46.9	888.1	0.0	18.3	76.4	46.9	25.0	11.0		
	Supply/Procmt	45.0	47.8	972.7	0.0	24.8	55.7	73.9	36.8	3.3		
	Scientist/Prof	40.3	41.2	891.8	0.0	15.8	64.8	62.4	28.6	6.7		
	Admin/Executive	35.1	35.7	567.9	0.0	0.0	72.5	29.9	11.2	0.0		
	Other Officer	37.4	38.7	814.9	0.0	16.9	47.0	68.9	30.2	0.0		
		106.8	107.2	1946.0	0.0	14.4	172.5	126.7	75.7	0.0		
1991												
	Tactical Ops	47.0	48.9	991.1	0.0	20.3	73.6	68.2	30.0	6.0		
	Intell/Enginr/Maint	39.3	39.7	777.8	0.0	11.3	48.1	51.2	44.8	0.0		
	Health Care	46.8	47.5	836.0	0.0	0.0	79.6	53.7	29.4	4.9		
	Supply/Procmt	45.9	49.2	1066.2	0.0	39.9	76.3	67.1	28.3	5.5		
	Scientist/Prof	35.0	35.9	810.6	0.0	12.8	59.1	64.7	22.7	2.8		
	Admin/Executive	36.2	36.9	619.0	0.0	0.0	57.7	43.3	22.8	0.0		
	Other Officer	34.6	35.8	739.2	0.0	30.8	66.7	39.0	11.3	0.0		
		180.9	181.7	3773.9	0.0	84.3	207.6	266.4	93.1	103.4		

Table 19. (cont'd) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Women Officers, by Job Group, 1976-1994

'-' denotes incongruity among data prohibiting valid rate calculations; Total Fertility Rate calculated from available data

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age-Specific Births / 1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1992										
Tactical Ops	50.6	53.3	1097.7	0.0	17.8	68.9	85.7	41.6	5.6	
Intell/Enginr/Maint	35.7	36.1	736.4	0.0	8.9	39.0	61.7	37.7	0.0	
Health Care	40.2	41.3	784.4	0.0	8.5	54.7	69.5	19.9	4.3	
Supply/Procmt	52.8	57.4	1157.5	0.0	13.7	73.2	83.6	53.2	7.8	
Scientist/Prof	31.7	32.9	753.0	0.0	13.8	55.5	60.6	20.8	0.0	
Admin/Executive	31.5	32.5	649.7	0.0	0.0	42.0	41.5	23.1	23.3	
Other Officer	47.3	50.0	1131.5	0.0	20.2	53.2	133.6	19.3	0.0	
			6418.0	0.0	949.9				333.7	
1993										
Tactical Ops	46.1	48.9	1046.6	0.0	19.5	72.3	77.4	35.0	5.0	
Intell/Enginr/Maint	33.4	34.0	670.4	0.0	0.0	42.8	56.0	35.3	0.0	
Health Care	42.9	44.3	881.1	0.0	12.9	54.3	77.2	26.2	5.7	
Supply/Procmt	49.4	54.0	1211.5	0.0	31.0	92.5	80.2	34.1	4.4	
Scientist/Prof	36.0	37.7	870.1	0.0	27.6	59.5	46.8	36.9	3.2	
Admin/Executive	16.1	16.6	322.5	0.0	0.0	8.2	34.2	22.1	0.0	
Other Officer	202.5	230.3	6791.0	0.0	0.0	376.0	667.2	214.7	100.3	
	84.4	88.4	2242.9	0.0	33.4	173.3	186.4	44.5	10.9	
1994										
Tactical Ops	41.3	44.3	958.0	0.0	16.3	58.9	73.4	35.0	7.9	
Intell/Enginr/Maint	24.3	25.0	550.5	0.0	10.6	22.4	51.5	25.7	0.0	
Health Care	26.9	27.8	582.9	0.0	0.0	33.5	44.4	27.4	11.3	
Supply/Procmt	42.8	47.3	1053.0	0.0	22.7	63.9	78.4	35.4	10.1	
Scientist/Prof	25.2	26.5	610.9	0.0	16.4	39.4	46.1	17.1	3.1	
Admin/Executive	23.1	23.9	435.8	0.0	0.0	38.0	29.3	19.9	0.0	
Other Officer	96.0	113.3	5844.2	0.0	0.0	996.5	105.7	66.7	0.0	
	127.7	138.1	3316.1	0.0	55.8	222.0	271.1	103.4	11.0	
1990-1994										
Tactical Ops	46.1	48.4	1002.0	0.0	18.3	67.7	73.2	35.4	5.9	
Intell/Enginr/Maint	34.0	34.5	695.8	0.0	8.1	39.7	49.8	41.5	0.0	
Health Care	41.6	42.5	810.5	0.0	8.3	63.6	57.7	25.4	7.2	
Supply/Procmt	47.2	51.1	1093.9	0.0	26.7	71.4	76.5	37.6	6.5	
Scientist/Prof	33.9	35.1	792.7	0.0	17.2	55.7	57.4	25.2	3.0	
Admin/Executive	26.4	27.1	491.6	0.0	0.0	39.7	34.8	20.0	3.8	
Other Officer	51.2	54.0	1145.5	0.0	16.1	74.7	102.3	31.3	4.7	
	147.9	154.3	3409.2	0.0	59.5	243.0	265.2	95.7	18.4	

Table 19. (cont'd) Total Live Births per 1,000, General Fertility Rate, Total Fertility Rate and Age-Specific Births per 1,000 Active Duty Air Force (ADAF) Women Officers, by Job Group, 1975-1994

... denotes incongruity among data prohibiting valid rate calculations; Total Fertility Rate calculated from available data

Year and Job Group	Total Live Births / 1,000	General Fertility Rate (17-44)	Total Fertility Rate	Age-Specific Births /1,000						
				17-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975-1994										
Tactical Ops	38.8	39.4	790.7	0.0	18.3	50.4	54.1	29.8	5.5	
Intell/Engineer/Maint	30.8	30.6	634.9	0.0	16.5	32.4	44.2	33.9	0.0	
Health Care	37.2	37.2	711.3	0.0	17.3	49.8	47.1	21.9	6.1	
Supply/Procurement	43.5	45.5	921.1	0.0	19.9	60.8	64.5	33.1	5.9	
Scientist/Professor	34.2	33.7	677.4	0.0	24.7	46.8	39.7	20.9	3.4	
Admin/Executive	30.0	29.7	554.3	0.0	7.2	37.2	38.6	25.2	2.6	
Other Officer	47.8	49.7	1095.7	0.0	21.6	65.2	88.8	38.7	4.8	
	36.2	36.8	849.3	0.0	9.2	41.3	56.3	48.4	14.6	

Figure 19a. Live Births per 1000 ADAF Women Officers, Tactical Ops, 1975-1994

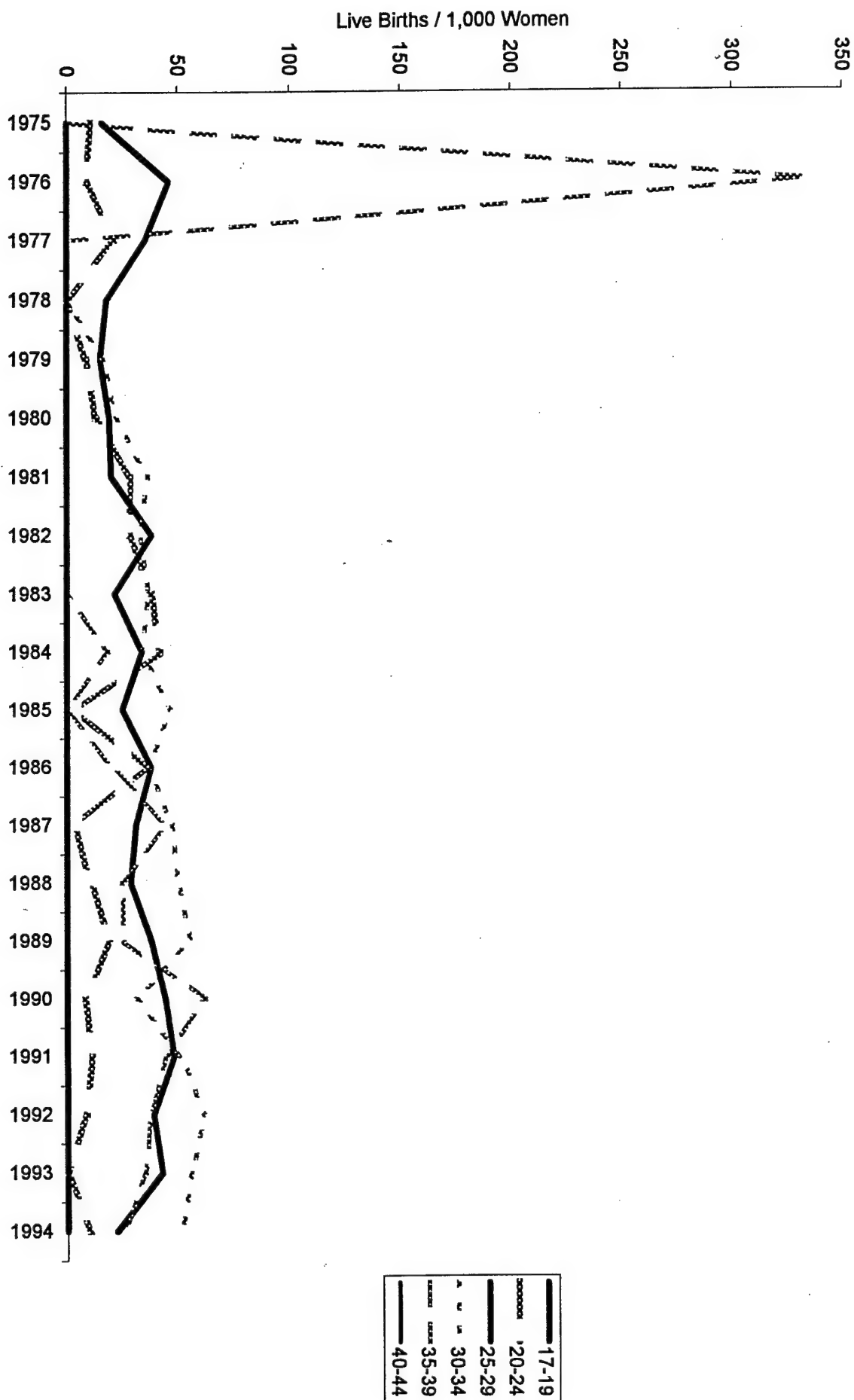


Figure 19b. Live Births per 1000 ADAP Women Officers, Intel/Englnr/Maint, 1975-1994



Figure 19c. Live Births per 1000 ADAP Women Officers, Health Care, 1975-1994

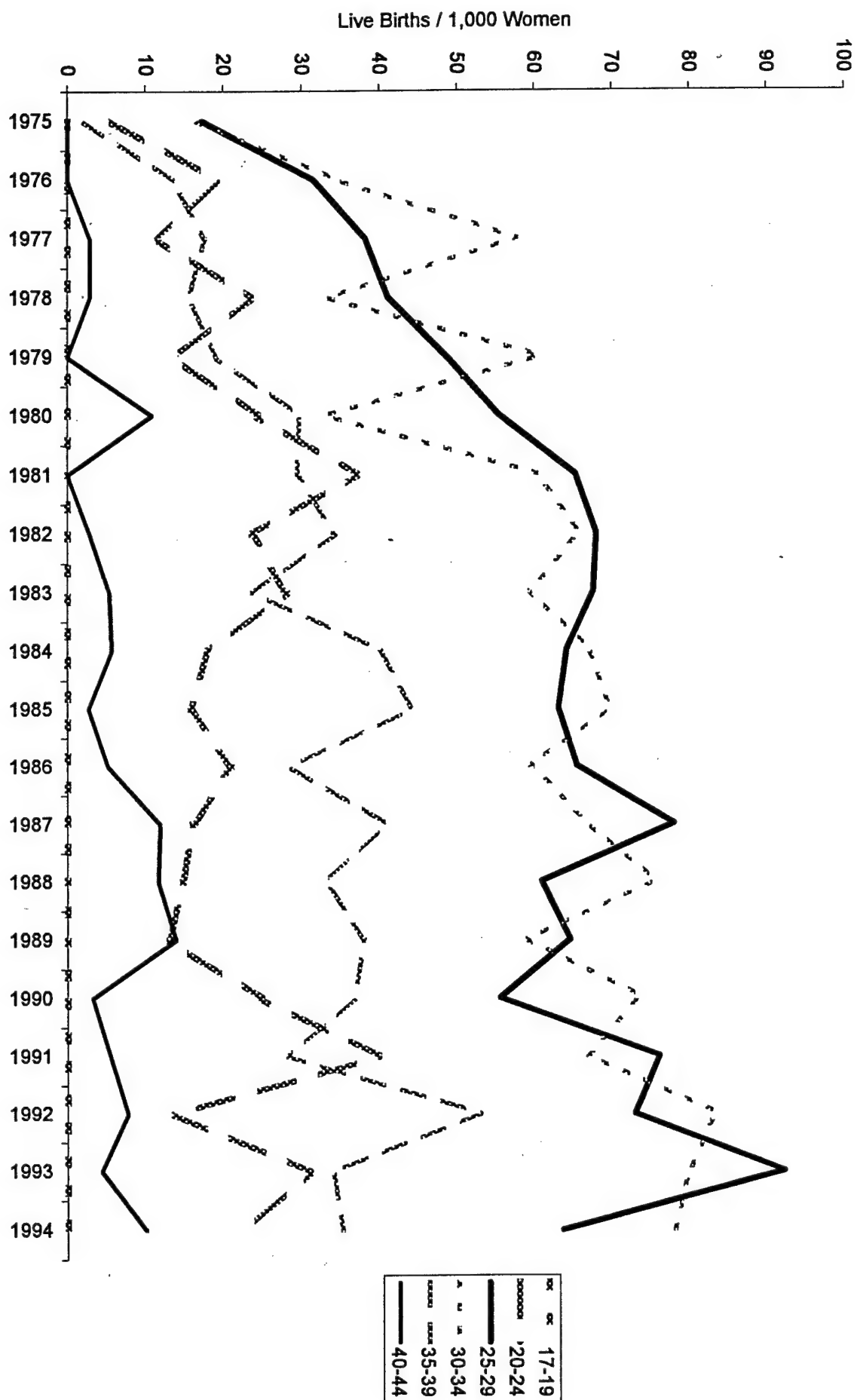


Figure 19d. Live Births per 1000 ADAF Women Officers, Supply/Procurement, 1975-1994

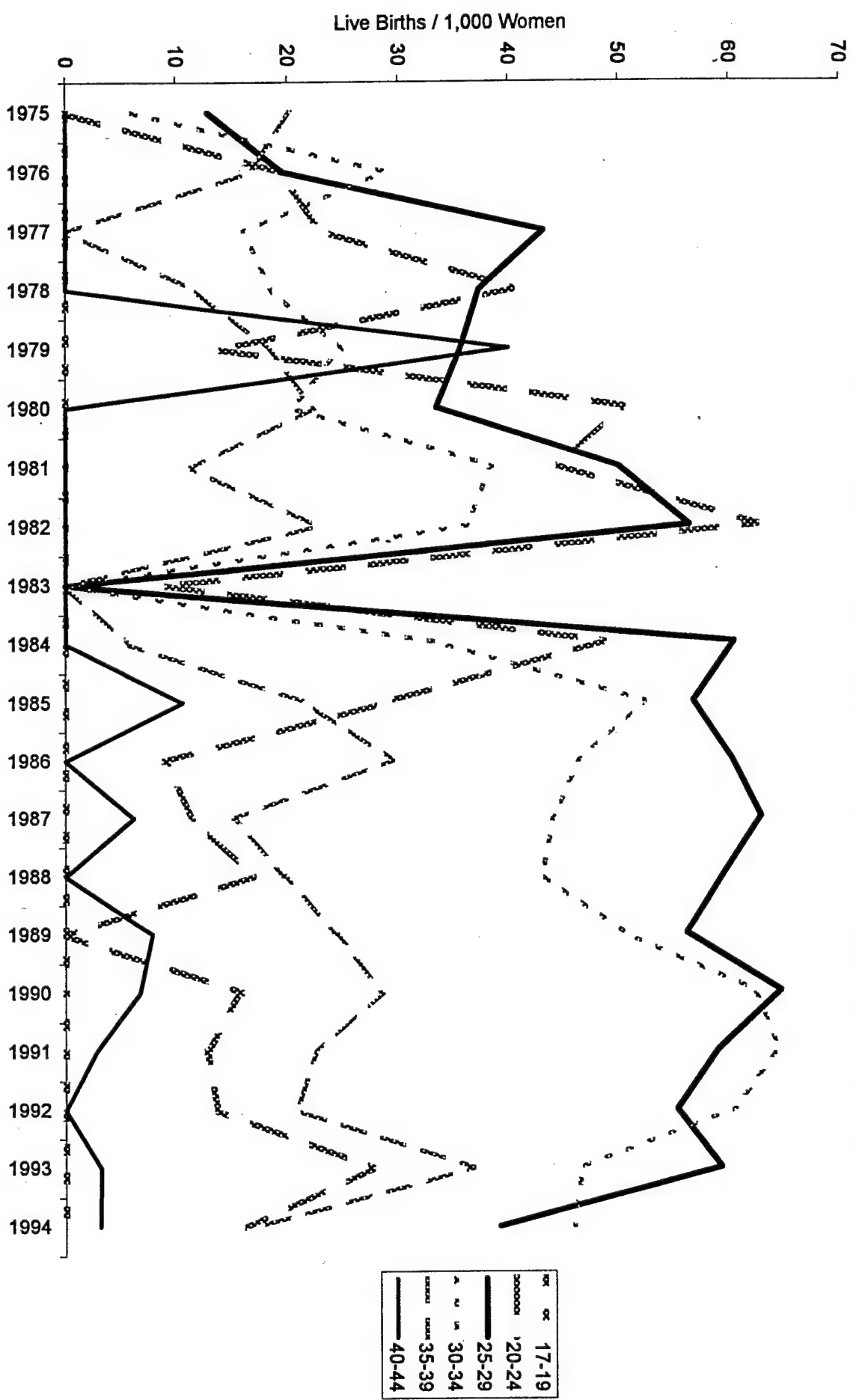


Figure 19e. Live Births per 1000 ADAF Women Officers, Scientist/Prof, 1975-1994

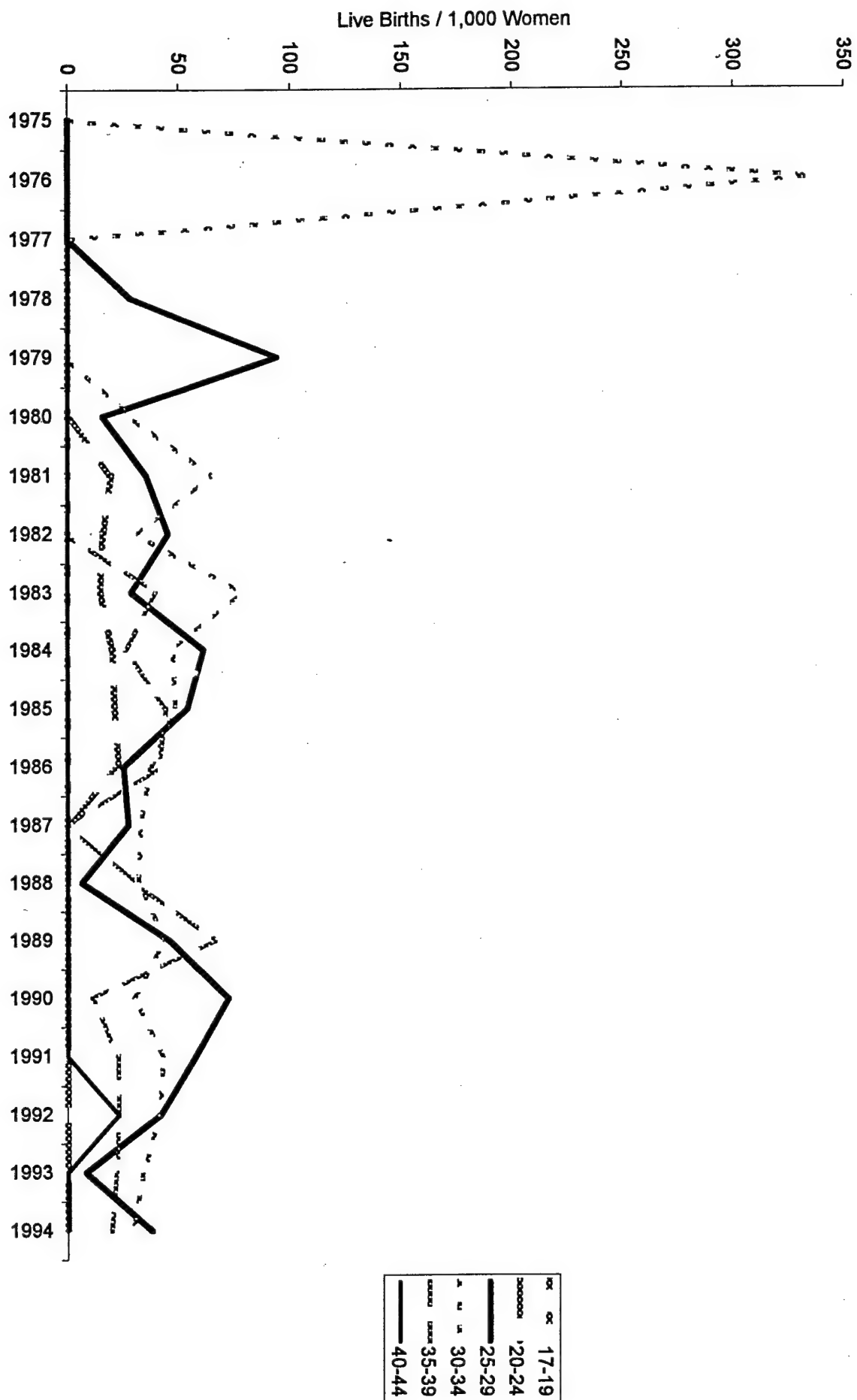


Figure 19f. Live Births per 1000 ADAF Women Officers, Admin/Executive, 1975-1994

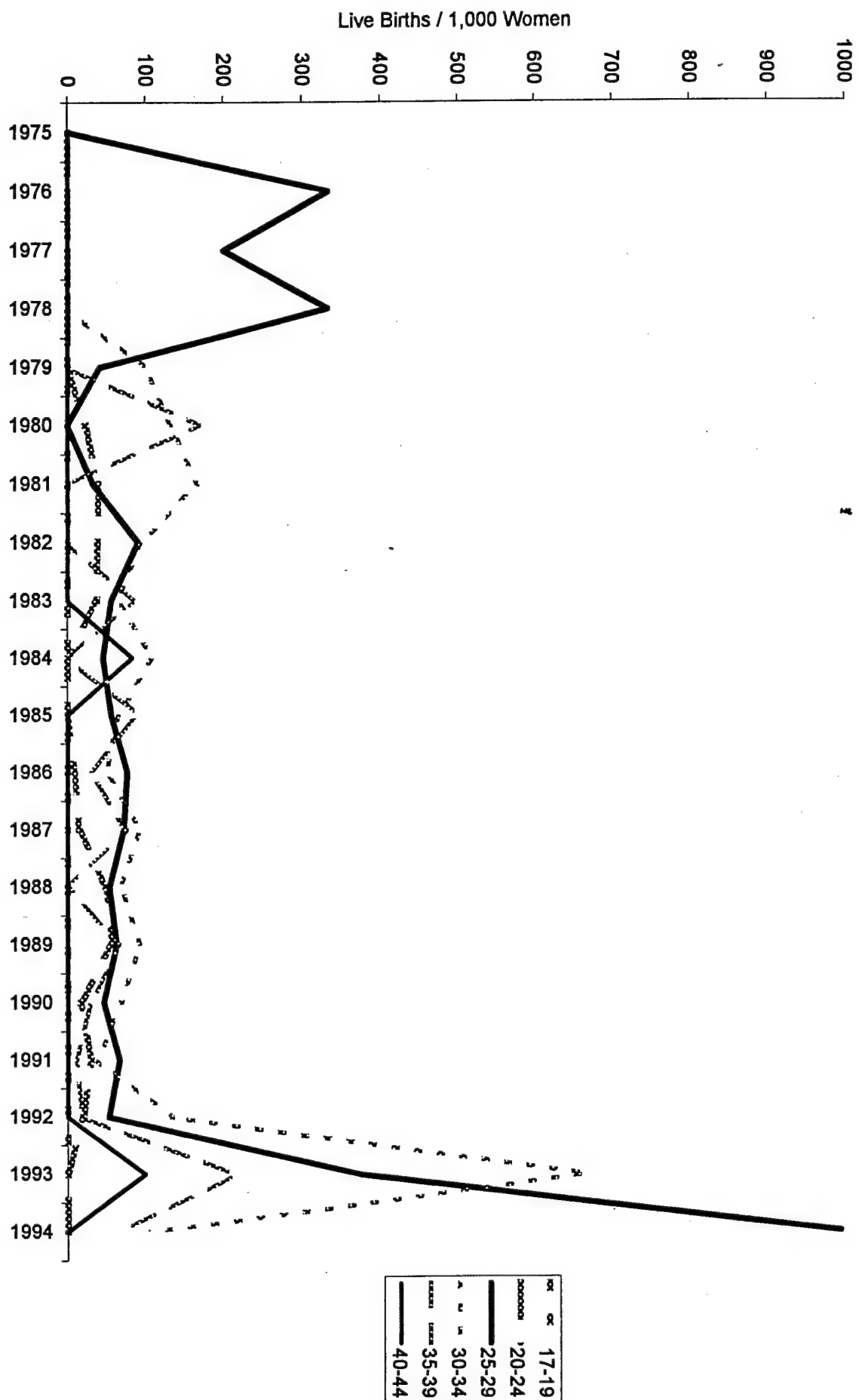


Figure 19g. Total Fertility Rates for ADAF Women Officers, by Job Group, 1975-1994

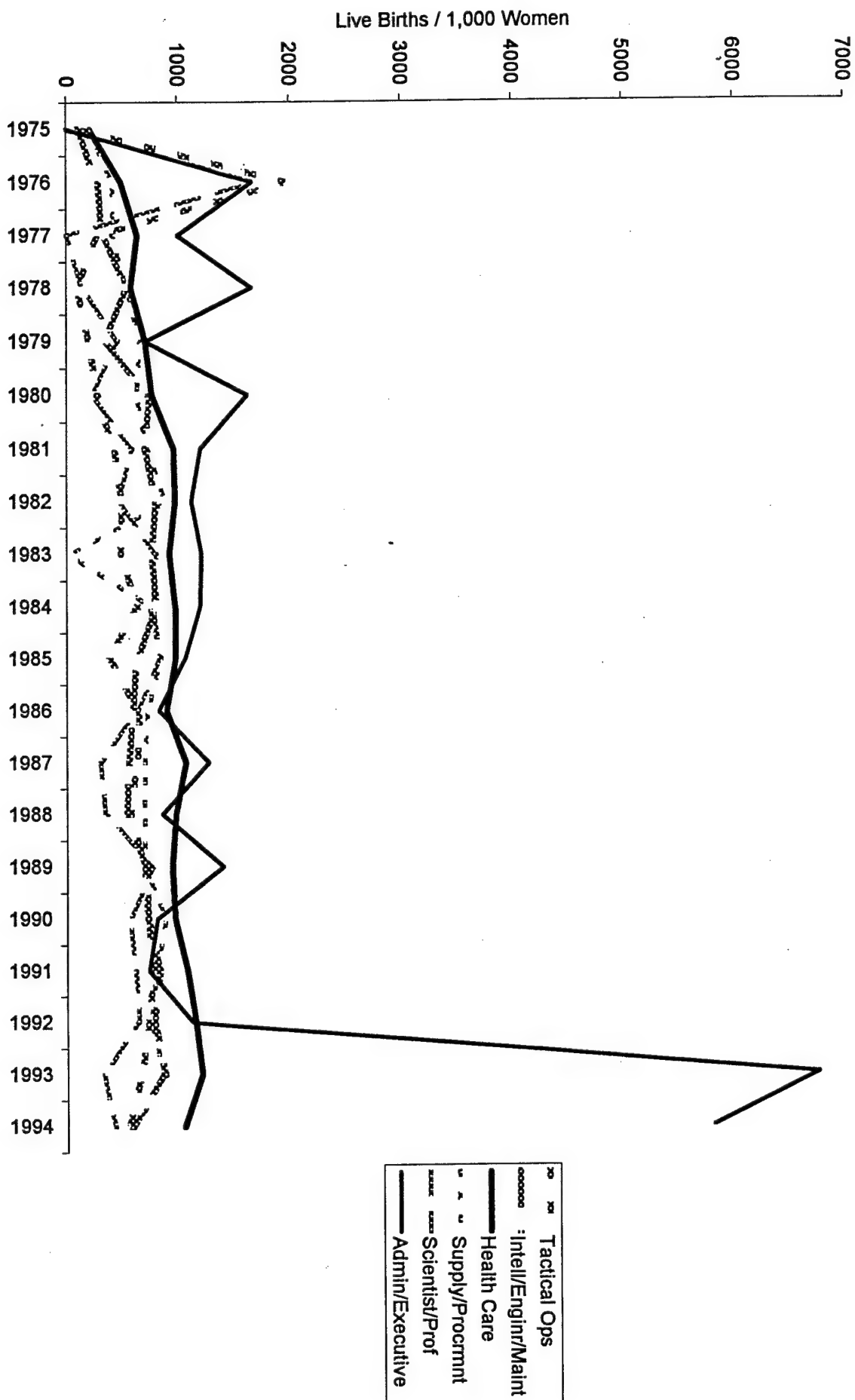


Table 20a. Total Live Births per 1,000 Active Duty Air Force (ADAF) Women by Major Command Function, 1975-1994

	All Functions			Training			Operations			Logistics R&D			Other		
	Total	Enlisted	Officer	Total	Enlisted	Officer	Total	Enlisted	Officer	Total	Enlisted	Officer	Total	Enlisted	Officer
	Live Births / 1,000			Live Births / 1,000			Live Births / 1,000			Live Births / 1,000			Live Births / 1,000		
1975	37.3	42.4	10.5	18.0	19.5	7.3	43.3	49.5	9.7	38.7	51.3	14.0	33.3	36.1	13.6
1976	51.7	56.5	23.2	29.2	29.5	27.7	59.8	65.8	24.3	51.3	68.2	14.6	44.5	46.8	20.6
1977	52.1	56.1	25.7	25.2	25.6	21.1	61.1	65.9	29.2	71.4	91.1	25.3	43.4	47.0	9.1
1978	52.9	56.6	27.6	28.7	29.3	24.2	66.1	71.2	31.3	55.8	68.5	22.1	29.3	30.3	14.6
1979	57.5	62.0	29.3	28.7	29.8	21.2	67.9	73.7	31.1	62.7	74.8	32.3	47.6	49.6	28.4
1975-1979	51.5	55.9	24.1	26.5	27.2	20.8	61.3	66.9	26.2	57.2	71.9	22.6	39.3	41.4	17.8
1980	71.3	77.8	33.0	31.3	32.0	26.2	74.3	81.1	33.4	76.3	94.4	32.2	40.7	43.5	12.4
1981	79.8	86.1	43.6	39.4	40.4	33.1	79.0	85.0	42.0	80.8	94.9	46.5	46.2	48.9	25.7
1982	85.7	92.8	47.4	47.4	50.5	31.3	83.0	88.2	51.2	76.9	92.5	44.9	49.3	55.1	12.8
1983	80.4	86.7	48.6	45.9	47.3	39.6	81.6	89.1	42.2	76.0	91.3	47.0	14.7	13.5	57.8
1984	75.7	81.1	48.8	40.5	42.7	30.7	78.6	84.0	48.9	75.7	91.0	46.7	12.8	12.5	16.1
1980-1984	78.6	84.9	44.7	40.6	42.2	32.3	79.4	85.6	43.8	77.1	92.7	44.1	32.7	34.1	19.0
1985	71.5	76.6	46.4	37.9	38.4	35.5	74.1	79.9	44.0	68.1	85.2	38.0	11.3	10.6	17.2
1986	69.9	74.2	48.7	42.8	42.4	44.6	68.7	73.5	42.9	65.5	78.8	43.4	14.1	14.2	13.9
1987	73.7	78.5	49.7	50.3	48.9	57.9	73.9	78.8	46.7	75.2	89.0	49.0	13.7	14.5	9.6
1988	72.7	77.7	48.3	54.1	54.6	51.7	68.8	73.7	42.5	78.0	92.9	49.5	12.0	11.9	12.5
1989	66.8	71.3	45.8	48.3	46.9	54.7	68.5	73.2	44.3	68.8	85.2	38.8	14.1	14.8	9.9
1985-1989	70.9	75.7	47.8	46.5	46.0	48.8	70.8	75.8	44.1	70.8	86.0	43.4	13.1	13.3	11.9
1990	69.4	74.3	47.1	47.9	47.5	49.6	67.1	72.3	41.7	74.3	85.7	49.6	17.8	17.7	18.3
1991	67.9	72.1	49.7	55.3	55.5	54.8	63.7	67.9	42.3	73.4	81.3	56.1	27.1	30.8	15.8
1992	68.5	72.2	52.3	45.3	44.8	47.0	69.2	71.1	58.0	67.0	74.6	50.2	16.4	19.9	7.2
1993	66.7	70.9	47.9	46.0	48.7	37.0	67.9	69.9	56.1	62.7	70.9	43.1	10.2	12.2	4.5
1994	60.0	63.0	46.7	38.6	37.6	42.3	60.3	64.0	42.0	61.4	66.5	49.4	32.6	33.3	28.1
1990-1994	66.6	70.6	48.7	46.2	46.4	45.4	65.8	69.4	47.3	67.4	75.3	49.6	22.4	24.4	14.4
1975-1994	68.4	73.3	44.0	40.7	40.9	39.7	70.2	75.2	42.4	69.3	82.2	42.3	24.9	26.5	14.8

Table 20b. Total Live Births per 1,000 ADAF Women by Major Command Function, Enlisted and Officer, 1975-1994						
	All Functions	Major Command Function				Other
		Training	Operations	Logistics R&D	Live Births / 1000	
1975	37.3	18.0	43.3	38.7	33.3	
Enlisted	42.4	19.5	49.5	51.3	36.1	
Officer	10.5	7.3	9.7	14.0	13.6	
1976	51.7	29.2	59.8	51.3	44.5	
Enlisted	56.5	29.5	65.8	68.2	46.8	
Officer	23.2	27.7	24.3	14.6	20.6	
1977	52.1	25.2	61.1	71.4	43.4	
Enlisted	56.1	25.6	65.9	91.1	47.0	
Officer	25.7	21.1	29.2	25.3	9.1	
1978	52.9	28.7	66.1	55.8	29.3	
Enlisted	56.6	29.3	71.2	68.5	30.3	
Officer	27.6	24.2	31.3	22.1	14.6	
1979	57.5	28.7	67.9	62.7	47.6	
Enlisted	62.0	29.8	73.7	74.8	49.6	
Officer	29.3	21.2	31.1	32.3	28.4	
1975-1979	51.5	26.5	61.3	57.2	39.3	
Enlisted	55.9	27.2	66.9	71.9	41.4	
Officer	24.1	20.8	26.2	22.6	17.8	

Table 20b. (cont'd.) Total Live Births per 1,000 ADAF Women by Major Command Function, Enlisted and Officer, 1975-1994

Major Command Group					
	All Functions	Training	Operations	Logistics R&D	Other
1980	71.3	31.3	74.3	76.3	40.7
Enlisted	77.8	32.0	81.1	94.4	43.5
Officer	33.0	26.2	33.4	32.2	12.4
1981	79.8	39.4	79.0	80.8	46.2
Enlisted	86.1	40.4	85.0	94.9	48.9
Officer	43.6	33.1	42.0	46.5	25.7
1982	85.7	47.4	83.0	76.9	49.3
Enlisted	92.8	50.5	88.2	92.5	55.1
Officer	47.4	31.3	51.2	44.9	12.8
1983	80.4	45.9	81.6	76.0	14.7
Enlisted	86.7	47.3	89.1	91.3	13.5
Officer	48.6	39.6	42.2	47.0	57.8
1984	75.7	40.5	78.6	75.7	12.8
Enlisted	81.1	42.7	84.0	91.0	12.5
Officer	48.8	30.7	48.9	46.7	16.1
1980-1984	78.6	40.6	79.4	77.1	32.7
Enlisted	84.9	42.2	85.6	92.7	34.1
Officer	44.7	32.3	43.8	44.1	19.0

Table 20b. (cont'd.) Total Live Births per 1,000 ADAF Women by Major Command Function, Enlisted and Officer, 1975-1994

	Major Command Group				
	All Functions	Training	Operations	Logistics R&D	Other
	Live Births / 1000				
1985	71.5	37.9	74.1	68.1	11.3
Enlisted	76.6	38.4	79.9	85.2	10.6
Officer	46.4	35.5	44.0	38.0	17.2
1986	69.9	42.8	68.7	65.5	14.1
Enlisted	74.2	42.4	73.5	78.8	14.2
Officer	48.7	44.6	42.9	43.4	13.9
1987	73.7	50.3	73.9	75.2	13.7
Enlisted	78.5	48.9	78.8	89.0	14.5
Officer	49.7	57.9	46.7	49.0	9.6
1988	72.7	54.1	68.8	78.0	12.0
Enlisted	77.7	54.6	73.7	92.9	11.9
Officer	48.3	51.7	42.5	49.5	12.5
1989	66.8	48.3	68.5	68.8	14.1
Enlisted	71.3	46.9	73.2	85.2	14.8
Officer	45.8	54.7	44.3	38.8	9.9
1985-1989	70.9	46.5	70.8	70.8	13.1
Enlisted	75.7	46.0	75.8	86.0	13.3
Officer	47.8	48.8	44.1	43.4	11.9

Table 20b. (cont'd.) Total Live Births per 1,000 ADAF Women by Major Command Function, Enlisted and Officer, 1975-1994

Major Command Group					
	All Functions	Training	Live Births / 1000		
			Operations	Logistics R&D	Other
1990	69.4	47.9	67.1	74.3	17.8
Enlisted	74.3	47.5	72.3	85.7	17.7
Officer	47.1	49.6	41.7	49.6	18.3
1991	67.9	55.3	63.7	73.4	27.1
Enlisted	72.1	55.5	67.9	81.3	30.8
Officer	49.7	54.8	42.3	56.1	15.8
1992	68.5	45.3	69.2	67.0	16.4
Enlisted	72.2	44.8	71.1	74.6	19.9
Officer	52.3	47.0	58.0	50.2	7.2
1993	66.7	46.0	67.9	62.7	10.2
Enlisted	70.9	48.7	69.9	70.9	12.2
Officer	47.9	37.0	56.1	43.1	4.5
1994	60.0	38.6	60.3	61.4	32.6
Enlisted	63.0	37.6	64.0	66.5	33.3
Officer	46.7	42.3	42.0	49.4	28.1
1990-1994	66.6	46.2	65.8	67.4	22.4
Enlisted	70.6	46.4	69.4	75.3	24.4
Officer	48.7	45.4	47.3	49.6	14.4

Table 20 b. (cont'd.) Total Live Births per 1,000 ADAF Women by
Major Command Function, Enlisted and Officer, 1975-1994

	Major Command Group				
	All Functions	Training	Operations	Logistics R&D	Other
	Live Births / 1000				
1975-1994	68.4	40.7	70.2	69.3	24.9
Enlisted	73.3	40.9	75.2	82.2	26.5
Officer	44.0	39.7	42.4	42.3	14.8

Figure 20. Live Births per 1000 ADAF Women by Major Command Function, 1975-1994



Figure 20a. Live Births per 1000 ADAF Women, Enlisted Grades by Major Command Function, 1975-1994



Figure 20b. Live Births per 1000 ADAF Women, Company and Field Grades, by Major Command Function, 1975-1994



Table 21a. Total Live Births per 1,000 Active Duty Air Force (ADAF) Women by Geographical Region, 1975-1994

	All Regions			United States			Europe			Pacific		
	Total	Enlisted	Officer	Total	Enlisted	Officer	Total	Enlisted	Officer	Total	Enlisted	Officer
	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000	Live Births / 1,000
1975	36.1	40.9	10.3	36.5	41.2	10.6	37.0	42.3	10.6	26.9	32.3	4.1
1976	50.5	55.1	23.2	50.6	55.2	22.7	50.9	55.0	24.1	47.9	52.0	30.1
1977	52.1	56.1	25.7	52.7	56.8	25.4	45.4	47.9	27.7	53.2	57.2	28.3
1978	52.9	56.6	27.6	53.5	57.0	29.2	58.9	65.1	14.5	27.9	29.5	16.8
1979	57.5	62.0	29.3	59.2	64.2	28.8	54.5	57.3	36.0	28.8	29.1	26.9
1975-1979	51.1	55.4	24.1	51.8	56.3	24.2	50.9	55.0	23.9	35.9	38.4	21.5
1980	62.3	67.7	30.5	63.6	69.1	31.7	64.6	72.0	19.7	30.2	30.6	28.2
1981	68.8	73.9	39.9	71.9	77.4	40.9	54.1	57.8	31.0	43.7	44.5	38.7
1982	73.3	78.9	43.4	77.0	83.3	44.8	59.4	62.6	37.1	36.0	37.7	25.1
1983	69.0	74.1	42.8	72.2	77.7	45.1	57.2	61.6	26.3	36.3	37.9	26.4
1984	65.4	69.8	43.5	68.4	73.3	45.2	52.0	55.5	27.6	38.9	39.0	38.8
1980-1984	67.8	72.9	40.4	70.7	76.2	42.0	57.2	61.5	28.5	37.2	38.1	31.6
1985	60.8	65.1	39.9	63.4	68.3	40.2	51.2	53.2	36.3	34.9	34.1	39.7
1986	58.4	61.9	41.3	60.8	64.5	43.7	51.4	54.8	26.6	29.5	31.8	16.2
1987	62.6	66.4	44.2	64.5	68.8	44.6	57.9	59.9	43.2	39.0	39.6	35.1
1988	60.0	63.8	41.4	60.7	64.8	42.0	60.4	64.1	33.7	45.5	46.0	42.7
1989	58.6	62.2	41.4	59.6	63.2	43.5	58.7	63.0	27.5	41.3	44.8	20.9
1985-1989	60.1	63.9	41.6	61.8	65.9	42.9	56.1	59.1	33.4	38.2	39.5	30.6
1990	60.3	64.2	42.3	65.6	70.6	44.6	39.4	41.1	27.1	35.5	36.7	27.9
1991	60.7	64.6	43.5	63.7	68.2	45.6	54.6	57.9	30.6	34.6	36.0	24.3
1992	60.0	62.8	47.5	63.5	67.0	49.3	48.8	50.7	35.1	36.6	36.7	35.4
1993	57.4	60.8	42.4	61.0	64.8	45.7	38.2	40.9	20.4	41.2	44.9	17.2
1994	50.7	52.8	41.1	53.8	56.3	43.1	29.9	31.2	22.0	36.5	37.8	28.0
1990-1994	57.9	61.2	43.4	61.6	65.5	45.7	43.2	45.5	27.5	36.9	38.5	26.8
1975-1994	60.0	64.0	39.4	62.3	66.7	40.9	52.1	55.4	29.1	37.2	38.6	28.1

**Table 21b. Total Live Births per 1,000 ADAF Women by Geographical Region,
Enlisted and Officer, 1975-1994**

	Geographic Region			
	All Regions	United States Live Births / 1,000	Europe	Pacific
1975	36.1	36.5	37.0	26.9
Enlisted	40.9	41.2	42.3	32.3
Officer	10.3	10.6	10.6	4.1
1976	50.5	50.6	50.9	47.9
Enlisted	55.1	55.2	55.0	52.0
Officer	23.2	22.7	24.1	30.1
1977	52.1	52.7	45.4	53.2
Enlisted	56.1	56.8	47.9	57.2
Officer	25.7	25.4	27.7	28.3
1978	52.9	53.5	58.9	27.9
Enlisted	56.6	57.0	65.1	29.5
Officer	27.6	29.2	14.5	16.8
1979	57.5	59.2	54.5	28.8
Enlisted	62.0	64.2	57.3	29.1
Officer	29.3	28.8	36.0	26.9
1975-1979	51.1	51.8	50.9	35.9
Enlisted	55.4	56.3	55.0	38.4
Officer	24.1	24.2	23.9	21.5

Table 21b. (cont'd.) Total Live Births per 1,000 ADAF Women by Geographical Region, Enlisted and Officer, 1975-1994

	Geographic Region		
	All Regions	United States Live Births / 1,000	Europe Pacific
1980	62.3	63.6	64.6
Enlisted	67.7	69.1	72.0
Officer	30.5	31.7	19.7
1981	68.8	71.9	54.1
Enlisted	73.9	77.4	57.8
Officer	39.9	40.9	31.0
1982	73.3	77.0	59.4
Enlisted	78.9	83.3	62.6
Officer	43.4	44.8	37.1
1983	69.0	72.2	57.2
Enlisted	74.1	77.7	61.6
Officer	42.8	45.1	26.3
1984	65.4	68.4	52.0
Enlisted	69.8	73.3	55.5
Officer	43.5	45.2	27.6
1980-1984	67.8	70.7	57.2
Enlisted	72.9	76.2	61.5
Officer	40.4	42.0	28.5
			31.6

Table 21b. (cont'd.) Total Live Births per 1,000 ADAF Women by Geographical Region, Enlisted and Officer, 1975-1994

Geographic Region					
	All Regions	United States			
		Live Births / 1,000			
		Europe	Pacific		
1985	Enlisted	60.8	63.4	51.2	34.9
	Officer	65.1	68.3	53.2	34.1
1986	Enlisted	39.9	40.2	36.3	39.7
	Officer	58.4	60.8	51.4	29.5
1987	Enlisted	61.9	64.5	54.8	31.8
	Officer	41.3	43.7	26.6	16.2
1988	Enlisted	62.6	64.5	57.9	39.0
	Officer	66.4	68.8	59.9	39.6
1989	Enlisted	44.2	44.6	43.2	35.1
	Officer	60.0	60.7	60.4	45.5
1985-1989	Enlisted	63.8	64.8	64.1	46.0
	Officer	41.4	42.0	33.7	42.7
1985-1989	Enlisted	58.6	59.6	58.7	41.3
	Officer	62.2	63.2	63.0	44.8
1985-1989	Enlisted	41.4	43.5	27.5	20.9
	Officer	60.1	61.8	56.1	38.2
1985-1989	Enlisted	63.9	65.9	59.1	39.5
	Officer	41.6	42.9	33.4	30.6

Table 21b. (cont'd.) Total Live Births per 1,000 ADAF Women by Geographical Region, Enlisted and Officer, 1975-1994

Geographic Region					
	All Regions	United States		Pacific	
		Live Births / 1,000			
1990	Enlisted	60.3	65.6	39.4	35.5
	Officer	64.2	70.6	41.1	36.7
1991	Enlisted	42.3	44.6	27.1	27.9
	Officer	60.7	63.7	54.6	34.6
1992	Enlisted	64.6	68.2	57.9	36.0
	Officer	43.5	45.6	30.6	24.3
1993	Enlisted	60.0	63.5	48.8	36.6
	Officer	62.8	67.0	50.7	36.7
1994	Enlisted	47.5	49.3	35.1	35.4
	Officer	57.4	61.0	38.2	41.2
1990-1994	Enlisted	60.8	64.8	40.9	44.9
	Officer	42.4	45.7	20.4	17.2
1990-1994	Enlisted	50.7	53.8	29.9	36.5
	Officer	52.8	56.3	31.2	37.8
1990-1994	Enlisted	41.1	43.1	22.0	28.0
	Officer	57.9	61.6	43.2	36.9
1990-1994	Enlisted	61.2	65.5	45.5	38.5
	Officer	43.4	45.7	27.5	26.8

Table 21b. (cont'd.) Total Live Births per 1,000 ADAF Women by Geographical Region, Enlisted and Officer, 1975-1994

	Geographic Region			
	All Regions	United States Live Births / 1,000	Europe	Pacific
1975-1994	60.0	62.3	52.1	37.2
Enlisted	64.0	66.7	55.4	38.6
Officer	39.4	40.9	29.1	28.1

Figure 21. Live Births per 1000 ADAF Women by Geographical Region, 1975-1994

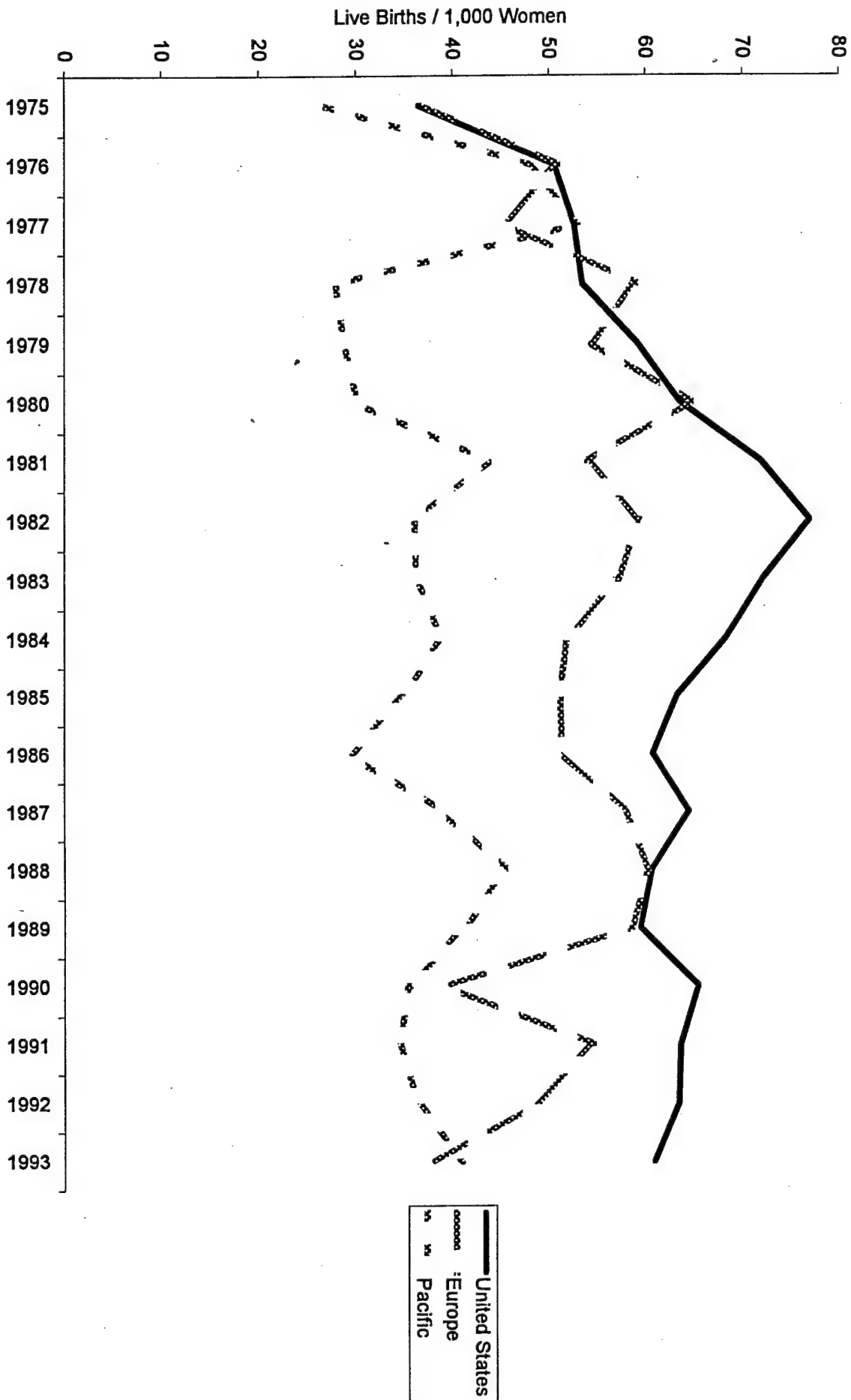


Figure 21a. Live Births per 1000 ADAF Women, Enlisted Grades, by Geographical Region, 1975-1994



Figure 21b. Live Births per 1000 ADAF Women, Company and Field Grades, by Geographical Region, 1975-1994

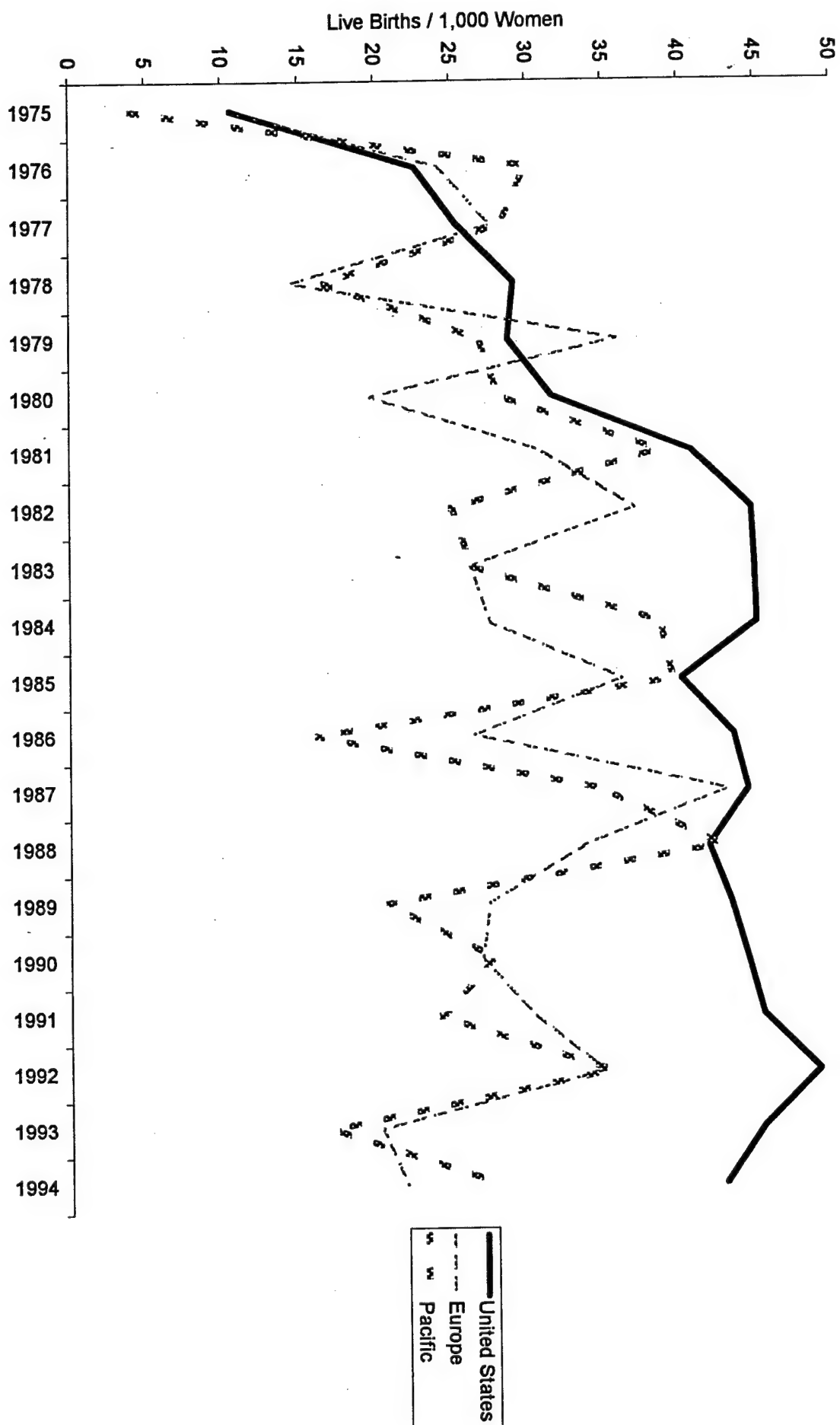


Table 22. Live Births, Birth Rates, and Fertility Rates, by Race: United States Resident Women, 1975-1993

Birth rates are live births per 1,000 population in specified group. Fertility rates per 1,000 women aged 15-44 years in specified group. Population enumerated as of April 1 for census years and estimated as of July 1 for all other years. Beginning with 1970, excludes births to nonresidents of the United States

These data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	Registered births					Live Birth Rates per 1000					General Fertility Rate				
	All Races	White	Black	American Indian	Asian or Pacific Islander	All Races	White	Black	American Indian	Asian or Pacific Islander	All Races	White	Black	American Indian	Asian or Pacific Islander
1975	3,144,198	2,551,996	511,581	27,546	—	14.6	13.6	20.7	—	—	66.0	62.5	87.9	—	—
1976	3,167,788	2,567,614	514,479	29,009	—	14.6	13.6	20.5	—	—	65.0	61.5	85.8	—	—
1977	3,326,632	2,691,070	544,221	30,500	—	15.1	14.1	21.4	—	—	66.8	63.2	88.1	—	—
1978	3,333,279	2,681,116	551,540	33,160	—	15.0	14.0	21.3	—	—	65.5	61.7	86.7	—	—
1979	3,494,398	2,808,420	577,855	34,269	—	15.6	14.5	22.0	—	—	67.2	63.4	88.3	—	—
1980	3,612,258	2,936,351	568,080	29,389	74,355	15.9	15.1	21.3	20.7	19.9	68.4	65.6	84.7	82.7	73.2
1981	3,629,238	2,947,679	564,955	29,698	84,553	15.8	15.0	20.8	20.0	20.1	67.3	64.8	82.0	79.6	73.7
1982	3,680,537	2,984,817	568,506	32,436	93,193	15.9	15.1	20.7	21.1	20.3	67.3	64.8	80.9	83.6	74.8
1983	3,638,933	2,946,468	562,624	32,881	95,713	15.6	14.8	20.2	20.6	19.5	65.7	63.4	78.7	81.8	71.7
1984	3,669,141	2,967,100	568,138	33,256	98,926	15.6	14.8	20.1	20.1	18.8	65.5	63.2	78.2	79.8	69.2
1985	3,760,561	3,037,913	581,824	34,037	104,606	15.8	15.0	20.4	19.8	18.7	66.3	64.1	78.8	78.6	68.4
1986	3,756,547	3,019,175	592,910	34,169	107,797	15.6	14.8	20.5	19.2	18.0	65.4	63.1	78.9	75.9	66.0
1987	3,809,394	3,043,828	611,173	35,322	116,560	15.7	14.9	20.8	19.1	18.4	65.8	63.3	80.1	75.6	67.1
1988	3,909,510	3,102,083	638,562	37,088	129,035	16.0	15.0	21.5	19.3	19.2	67.3	64.5	82.6	76.8	70.2
1989	4,040,958	3,192,355	673,124	39,478	133,075	16.4	15.4	22.3	19.7	18.7	69.2	66.4	86.2	79.0	68.2
1990	4,158,212	3,290,273	684,336	39,051	141,635	16.7	15.8	22.4	18.9	19.0	70.9	68.3	86.8	76.2	69.6
1991	4,110,907	3,241,273	682,602	38,841	145,372	16.3	15.4	21.9	18.3	18.2	69.6	67.0	85.2	75.1	67.6
1992	4,065,014	3,201,678	673,633	39,453	150,250	15.9	15.0	21.3	18.4	18.0	68.9	66.5	83.2	75.4	67.2
1993	4,000,240	3,149,833	658,875	38,732	152,800	15.5	14.7	20.5	17.8	17.7	67.6	65.4	80.5	73.4	66.7

Table 23. Total Fertility Rates and Age-specific Birth Rates for US Resident Women by Race, 1975-1993
Total Fertility Rate includes women ages 15-44.
These data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	Total Fertility Rate	Age of Mother								
		15-19 years								
		Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years
1975	1,766	55.6	36.1	85.0	113.0	108.2	52.3	19.5	4.6	0.3
White	1,682	46.4	28.0	74.0	108.2	108.1	51.3	18.2	4.2	0.2
Black	2,215	111.8	85.6	152.4	142.8	102.2	53.1	25.6	7.5	0.5
1976	1,731	52.8	34.1	80.5	110.3	106.2	53.6	19.0	4.3	0.2
White	1,648	44.1	26.3	70.2	105.3	105.9	52.6	17.8	3.9	0.2
Black	2,161	104.9	80.3	142.5	140.5	101.6	53.6	24.8	6.8	0.5
1977	1,783	52.8	33.9	80.9	112.9	111.0	56.4	19.2	4.2	0.2
White	1,699	44.1	26.1	70.5	107.7	110.9	55.3	18.0	3.8	0.2
Black	2,225	104.7	79.6	142.9	144.4	106.4	57.5	25.4	6.6	0.5
1978	1,753	51.5	32.2	79.8	109.9	108.5	57.8	19.0	3.9	0.2
White	1,664	42.9	24.9	69.4	104.1	107.9	56.6	17.7	3.5	0.2
Black	2,194	100.9	75.0	139.7	143.8	105.4	58.3	24.3	6.1	0.4
1979	1,801	52.3	32.3	81.3	112.8	111.4	60.3	19.5	3.9	0.2
White	1,712	43.7	24.7	71.0	107.0	110.8	59.0	18.3	3.5	0.2
Black	2,239	101.7	75.7	140.4	146.3	108.2	60.7	24.7	6.1	0.4

Table 23 (cont'd.) Total Fertility Rates and Age-specific Birth Rates for US Resident Women by Race, 1975-1993
Total Fertility Rate includes women ages 15-44.

	Total Fertility Rate	Age of Mother									
		15-19 years									
		Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years	
1980	1,833	53.0	32.5	82.1	115.1	112.9	61.9	19.8	3.9	0.2	
White	1,769	45.4	25.5	73.2	111.1	113.8	61.2	18.8	3.5	0.2	
Black	2,154	97.8	72.5	135.1	140.0	103.9	59.9	23.5	5.6	0.3	
1981	1,806	52.2	32.0	80.0	112.2	111.5	61.4	20.0	3.8	0.2	
White	1,745	44.9	25.4	71.5	108.3	112.3	61.0	19.0	3.4	0.2	
Black	2,096	94.5	69.3	131.0	136.5	102.3	57.4	23.1	5.4	0.3	
1982	1,821	52.4	32.3	79.4	111.6	111.0	64.1	21.2	3.9	0.2	
White	1,763	45.0	25.5	70.8	107.7	111.9	64.0	20.4	3.6	0.2	
Black	2,085	94.3	69.7	128.9	135.4	101.3	57.5	23.3	5.1	0.4	
1983	1,793	51.4	31.8	77.4	107.8	108.5	64.9	22.0	3.9	0.2	
White	1,737	43.9	25.0	68.8	103.8	109.4	65.3	21.3	3.6	0.2	
Black	2,044	93.9	69.6	127.1	131.9	98.4	56.2	23.3	5.1	0.3	
1984	1,800	50.6	31.0	77.4	106.8	108.7	67.0	22.9	3.9	0.2	
White	1,745	42.9	24.3	68.4	102.7	109.8	67.7	22.2	3.6	0.2	
Black	2,048	94.1	69.2	128.1	132.2	98.4	56.7	23.3	4.8	0.2	

Table 23 (cont'd.) Total Fertility Rates and Age-specific Birth Rates for US Resident Women by Race, 1975-1993
Total Fertility Rate includes women ages 15-44.

	Total Fertility Rate	Age of Mother									
		15-19 years				20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years
		Total	15-17 years	18-19 years							
1985	1,837	51.0	31.0	79.6	108.3	111.0	69.1	24.0	4.0	0.2	
White	1,783	43.3	24.4	70.4	104.1	112.3	69.9	23.3	3.7	0.2	
Black	2,085	95.4	69.3	132.4	135.0	100.2	57.9	23.9	4.6	0.3	
1986	1,830	50.2	30.5	79.6	107.4	109.8	70.1	24.4	4.1	0.2	
White	1,772	42.3	23.8	70.1	102.7	110.8	70.9	23.9	3.8	0.2	
Black	2,111	95.8	69.3	135.1	137.3	101.1	59.3	23.8	4.8	0.3	
1987	1,865	50.6	31.7	78.5	107.9	111.6	72.1	26.3	4.4	0.2	
White	1,801	42.5	24.6	68.9	102.3	112.3	73.0	25.9	4.1	0.2	
Black	2,173	97.6	72.1	135.8	142.7	104.3	60.6	24.6	4.8	0.2	
1988	1,927	53.0	33.6	78.9	110.2	114.4	74.8	28.1	4.8	0.2	
White	1,853	44.4	26.0	69.6	103.7	114.8	75.4	27.7	4.5	0.2	
Black	2,272	102.7	75.7	142.7	149.7	108.2	63.1	25.6	5.1	0.3	
1989	2,006	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2	
White	1,927	47.9	28.1	72.9	106.9	117.8	78.1	29.7	4.9	0.2	
Black	2,406	111.5	81.9	151.9	156.8	114.4	66.3	26.7	5.4	0.3	

Table 23 (cont'd.) Total Fertility Rates and Age-specific Birth Rates for US Resident Women by Race, 1975-1993
Total Fertility Rate includes women ages 15-44.

	Total Fertility Rate	Age of Mother								
		15-19 years								
		Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years
1990	2,073	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
White	1,999	50.8	29.5	78.0	109.8	120.7	81.7	31.5	5.2	0.2
Black	2,454	112.8	82.3	152.9	160.2	115.5	68.7	28.1	5.5	0.3
1991	2,065	62.1	38.7	94.4	115.7	118.2	79.5	32.0	5.5	0.2
White	1,991	52.8	30.7	83.5	109.0	118.8	80.5	31.8	5.2	0.2
Black	2,455	115.5	84.1	158.6	160.9	113.1	67.7	28.3	5.5	0.2
1992	2,057	60.7	37.8	94.5	114.6	117.4	80.2	32.5	5.9	0.3
White	1,946	51.8	28.1	72.9	106.9	117.8	78.1	29.7	4.9	0.2
Black	2,418	112.4	81.3	157.9	158.0	111.2	67.5	28.8	5.6	0.2
1993	2,038	59.6	37.8	92.1	112.6	115.5	80.8	32.9	6.1	0.3
White	1,977	51.1	30.3	82.1	106.9	116.6	82.1	32.7	5.9	0.3
Black	2,360	108.6	79.8	151.9	152.6	108.4	67.3	29.2	5.9	0.3

Table 24a. Total Fertility Rates and Age-specific Birth Rates for US Resident Women, 1975-1993

Total Fertility Rate includes women ages 15-44.

These data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	Age of Mother									
	Total Fertility Rate	15-19 years								
		Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years
1975	1,766	55.6	36.1	85.0	113.0	108.2	52.3	19.5	4.6	0.3
1976	1,731	52.8	34.1	80.5	110.3	106.2	53.6	19.0	4.3	0.2
1977	1,783	52.8	33.9	80.9	112.9	111.0	56.4	19.2	4.2	0.2
1978	1,753	51.5	32.2	79.8	109.9	108.5	57.8	19.0	3.9	0.2
1979	1,801	52.3	32.3	81.3	112.8	111.4	60.3	19.5	3.9	0.2
1980	1,833	53.0	32.5	82.1	115.1	112.9	61.9	19.8	3.9	0.2
1981	1,806	52.2	32.0	80.0	112.2	111.5	61.4	20.0	3.8	0.2
1982	1,821	52.4	32.3	79.4	111.6	111.0	64.1	21.2	3.9	0.2
1983	1,793	51.4	31.8	77.4	107.8	108.5	64.9	22.0	3.9	0.2
1984	1,800	50.6	31.0	77.4	106.8	108.7	67.0	22.9	3.9	0.2
1985	1,837	51.0	31.0	79.6	108.3	111.0	69.1	24.0	4.0	0.2
1986	1,830	50.2	30.5	79.6	107.4	109.8	70.1	24.4	4.1	0.2
1987	1,865	50.6	31.7	78.5	107.9	111.6	72.1	26.3	4.4	0.2
1988	1,927	53.0	33.6	79.9	110.2	114.4	74.8	28.1	4.8	0.2
1989	2,006	57.3	36.4	84.2	113.8	117.6	77.4	29.9	5.2	0.2
1990	2,073	59.9	37.5	88.6	116.5	120.2	80.8	31.7	5.5	0.2
1991	2,065	62.1	38.7	94.4	115.7	118.2	79.5	32.0	5.5	0.2
1992	2,057	60.7	37.8	94.5	114.6	117.4	80.2	32.5	5.9	0.3
1993	2,038	59.6	37.8	92.1	112.6	115.5	80.8	32.9	6.1	0.3

Table 24b. Total Fertility and Age-specific Birth Rates for White US Resident Women, 1975-1993

Total Fertility Rate includes women ages 15-44

These data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	Total Fertility Rate	Age of Mother									
		15-19 years									
		Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years	
1975	1,682	46.4	28.0	74.0	108.2	108.1	51.3	18.2	4.2	0.2	
1976	1,648	44.1	26.3	70.2	105.3	105.9	52.6	17.8	3.9	0.2	
1977	1,699	44.1	26.1	70.5	107.7	110.9	55.3	18.0	3.8	0.2	
1978	1,664	42.9	24.9	69.4	104.1	107.9	56.6	17.7	3.5	0.2	
1979	1,712	43.7	24.7	71.0	107.0	110.8	59.0	18.3	3.5	0.2	
1980	1,769	45.4	25.5	73.2	111.1	113.8	61.2	18.8	3.5	0.2	
1981	1,745	44.9	25.4	71.5	108.3	112.3	61.0	19.0	3.4	0.2	
1982	1,763	45.0	25.5	70.8	107.7	111.9	64.0	20.4	3.6	0.2	
1983	1,737	43.9	25.0	68.8	103.8	109.4	65.3	21.3	3.6	0.2	
1984	1,745	42.9	24.3	68.4	102.7	109.8	67.7	22.2	3.6	0.2	
1985	1,783	43.3	24.4	70.4	104.1	112.3	69.9	23.3	3.7	0.2	
1986	1,772	42.3	23.8	70.1	102.7	110.8	70.9	23.9	3.8	0.2	
1987	1,801	42.5	24.6	68.9	102.3	112.3	73.0	25.9	4.1	0.2	
1988	1,853	44.4	26.0	69.6	103.7	114.8	75.4	27.7	4.5	0.2	
1989	1,927	47.9	28.1	72.9	106.9	117.8	78.1	29.7	4.9	0.2	
1990	1,999	50.8	29.5	78.0	109.8	120.7	81.7	31.5	5.2	0.2	
1991	1,991	52.8	30.7	83.5	109.0	118.8	80.5	31.8	5.2	0.2	
1992	1,946	51.8	28.1	72.9	106.9	117.8	78.1	29.7	4.9	0.2	
1993	1,977	51.1	30.3	82.1	106.9	116.6	82.1	32.7	5.9	0.3	

Table 24c. Total Fertility and Age-specific Birth Rates for Black US Resident Women, 1975-1993

Total Fertility Rate includes women ages 15-44

These data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	Age of Mother									
	15-19 years									
	Total	15-17	18-19	20-24	25-29	30-34	35-39	40-44	45-49	
	Rate	years	years	years	years	years	years	years	years	
1975	2,215	111.8	85.6	152.4	142.8	102.2	53.1	25.6	7.5	0.5
1976	2,161	104.9	80.3	142.5	140.5	101.6	53.6	24.8	6.8	0.5
1977	2,225	104.7	79.6	142.9	144.4	106.4	57.5	25.4	6.6	0.5
1978	2,194	100.9	75.0	139.7	143.8	105.4	58.3	24.3	6.1	0.4
1979	2,239	101.7	75.7	140.4	146.3	108.2	60.7	24.7	6.1	0.4
1980	2,154	97.8	72.5	135.1	140.0	103.9	59.9	23.5	5.6	0.3
1981	2,096	94.5	69.3	131.0	136.5	102.3	57.4	23.1	5.4	0.3
1982	2,085	94.3	69.7	128.9	135.4	101.3	57.5	23.3	5.1	0.4
1983	2,044	93.9	69.6	127.1	131.9	98.4	56.2	23.3	5.1	0.3
1984	2,048	94.1	69.2	128.1	132.2	98.4	56.7	23.3	4.8	0.2
1985	2,085	95.4	69.3	132.4	135.0	100.2	57.9	23.9	4.6	0.3
1986	2,111	95.8	69.3	135.1	137.3	101.1	59.3	23.8	4.8	0.3
1987	2,173	97.6	72.1	135.8	142.7	104.3	60.6	24.6	4.8	0.2
1988	2,272	102.7	75.7	142.7	149.7	108.2	63.1	25.6	5.1	0.3
1989	2,406	111.5	81.9	151.9	156.8	114.4	66.3	26.7	5.4	0.3
1990	2,454	112.8	82.3	152.9	160.2	115.5	68.7	28.1	5.5	0.3
1991	2,455	115.5	84.1	158.6	160.9	113.1	67.7	28.3	5.5	0.2
1992	2,418	112.4	81.3	157.9	158.0	111.2	67.5	28.8	5.6	0.2
1993	2,360	108.6	79.8	151.9	152.6	108.4	67.3	29.2	5.9	0.3

Table 25. Age-Specific Birth Rates for Unmarried US Resident Women by Race, 1975, 1980-1993
Rates are births to unmarried women per 1,000 unmarried women in specified group, estimated as of July 1
These data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	Age of Mother									
	15-19 years									
	15-44 years	Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975	24.5	23.9	19.3	32.5	31.2	27.5	17.9	9.1	2.6	
White	12.4	12.0	9.6	16.5	15.5	14.8	9.8	5.4	1.5	
Black	84.2	93.5	76.8	123.8	108.0	75.7	50.0	20.5	7.2	
1980	29.4	27.6	20.6	39.0	40.9	34.0	21.1	9.7	2.6	
White	18.1	16.5	12.0	24.1	25.1	21.5	14.1	7.1	1.8	
Black	81.1	87.9	68.8	118.2	112.3	81.4	46.7	19.0	5.5	
1981	29.5	27.9	20.9	39.0	41.1	34.5	20.8	9.8	2.6	
White	18.6	17.2	12.6	24.6	25.8	22.3	14.2	7.2	1.9	
Black	79.4	85.0	65.9	114.2	110.7	83.1	45.5	19.6	5.6	
1982	30.0	28.7	21.5	39.6	41.5	35.1	21.9	10.0	2.7	
White	19.3	18.0	13.1	25.3	26.5	23.1	15.3	7.4	2.1	
Black	77.9	85.1	66.3	85.1	109.3	82.7	44.1	19.5	5.2	
1983	30.3	29.5	22.0	40.7	41.8	35.5	22.4	10.2	2.6	
White	19.8	18.7	13.6	26.4	27.1	23.8	15.9	7.8	2.0	
Black	76.2	85.5	66.8	111.9	107.2	79.7	43.8	19.4	4.8	
1984	31.0	30.0	21.9	42.5	43.0	37.1	23.3	10.9	2.5	
White	20.6	19.3	13.7	27.9	28.5	25.5	16.8	8.4	2.0	
Black	75.2	86.1	66.5	113.6	107.9	77.8	43.8	19.4	4.3	
1985	32.8	31.4	22.4	45.9	46.5	39.9	25.2	11.6	2.5	
White	22.5	20.8	14.5	31.2	31.7	28.5	18.4	9.0	2.0	
Black	77.0	87.6	66.8	117.9	113.1	79.3	47.5	20.4	4.3	
1986	34.2	32.3	22.8	48.0	49.3	42.2	27.2	12.2	2.7	
White	23.9	21.8	14.9	33.5	34.2	30.5	20.1	9.7	2.2	
Black	79.0	88.5	67.0	121.1	118.0	84.6	50.0	20.6	4.4	

Table 25 (cont'd.) Age-specific Birth Rates for Unmarried US Resident Women by Race, 1975, 1980-1993
Rates are births to unmarried women per 1,000 unmarried women in specified group, estimated as of July 1

	Age of Mother									
	15-19 years									
	15-44 years	Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1987	36.0	33.8	24.5	48.9	52.6	44.5	29.6	13.5	2.9	
White	25.3	23.2	16.2	34.5	36.6	32.0	22.3	10.7	2.4	
Black	82.6	90.9	69.9	123.0	126.1	91.6	53.1	22.4	4.7	
1988	38.5	36.4	26.4	51.5	56.0	48.5	32.0	15.0	3.2	
White	27.4	25.3	17.6	36.8	39.2	35.4	24.2	12.1	2.7	
Black	86.5	96.1	73.5	130.5	133.6	97.2	57.4	24.1	5.0	
1989	41.6	40.1	28.7	56.0	61.2	52.8	34.9	16.0	3.4	
White	30.2	28.0	19.3	40.2	43.8	39.1	26.8	13.1	2.9	
Black	90.7	104.5	78.9	140.9	142.4	102.9	60.5	24.9	5.0	
1990	43.8	42.5	29.6	60.7	65.1	56.0	37.6	17.3	3.6	
White	32.9	30.6	20.4	44.9	48.2	43.0	29.9	14.5	3.2	
Black	90.5	106.0	78.8	143.7	144.8	105.3	61.5	25.5	5.1	
1991	45.2	44.8	30.9	65.7	68.0	56.5	38.1	18.0	3.8	
White	34.6	32.8	21.8	49.6	51.5	44.6	31.1	15.2	3.2	
Black	89.5	108.5	80.4	148.7	147.5	100.9	60.1	25.6	5.4	
1992	45.2	44.6	30.4	67.3	68.5	56.5	37.9	18.8	4.1	
White	35.2	33.0	21.6	51.5	52.7	45.4	31.5	16.2	3.6	
Black	86.5	105.9	78.0	147.8	144.3	98.2	57.7	25.8	5.4	
1993	45.3	44.5	30.6	66.9	69.2	57.1	38.5	19.0	4.4	
White	35.9	33.6	22.1	52.4	54.2	46.7	32.2	16.4	3.9	
Black	84.0	102.4	76.8	141.6	142.2	94.5	57.3	25.9	5.8	

Table 26a. Age-specific Birth Rates for Unmarried US Resident Women, 1975, 1980-1993

Rates are births to unmarried women per 1,000 unmarried women in specified group, estimated as of July 1
These data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	Age of Mother									
	15-19 years									
	15-44 years	Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975	24.5	23.9	19.3	32.5	31.2	27.5	17.9	9.1	2.6	
1980	29.4	27.6	20.6	39.0	40.9	34.0	21.1	9.7	2.6	
1981	29.5	27.9	20.9	39.0	41.1	34.5	20.8	9.8	2.6	
1982	30.0	28.7	21.5	39.6	41.5	35.1	21.9	10.0	2.7	
1983	30.3	29.5	22.0	40.7	41.8	35.5	22.4	10.2	2.6	
1984	31.0	30.0	21.9	42.5	43.0	37.1	23.3	10.9	2.5	
1985	32.8	31.4	22.4	45.9	46.5	39.9	25.2	11.6	2.5	
1986	34.2	32.3	22.8	48.0	49.3	42.2	27.2	12.2	2.7	
1987	36.0	33.8	24.5	48.9	52.6	44.5	29.6	13.5	2.9	
1988	38.5	36.4	26.4	51.5	56.0	48.5	32.0	15.0	3.2	
1989	41.6	40.1	28.7	56.0	61.2	52.8	34.9	16.0	3.4	
1990	43.8	42.5	29.6	60.7	65.1	56.0	37.6	17.3	3.6	
1991	45.2	44.8	30.9	65.7	68.0	56.5	38.1	18.0	3.8	
1992	45.2	44.6	30.4	67.3	68.5	56.5	37.9	18.8	4.1	
1993	45.3	44.5	30.6	66.9	69.2	57.1	38.5	19.0	4.4	

Table 26b. Age-specific Birth Rates for Unmarried White US Resident Women, 1975, 1980-1993
Rates are births to unmarried women per 1,000 unmarried women in specified group, estimated as of July 1
These data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	Age of Mother									
	15-19 years									
	15-44 years	Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975	12.4	12.0	9.6	16.5	15.5	14.8	9.8	5.4	1.5	
1980	18.1	16.5	12.0	24.1	25.1	21.5	14.1	7.1	1.8	
1981	18.6	17.2	12.6	24.6	25.8	22.3	14.2	7.2	1.9	
1982	19.3	18.0	13.1	25.3	26.5	23.1	15.3	7.4	2.1	
1983	19.8	18.7	13.6	26.4	27.1	23.8	15.9	7.8	2.0	
1984	20.6	19.3	13.7	27.9	28.5	25.5	16.8	8.4	2.0	
1985	22.5	20.8	14.5	31.2	31.7	28.5	18.4	9.0	2.0	
1986	23.9	21.8	14.9	33.5	34.2	30.5	20.1	9.7	2.2	
1987	25.3	23.2	16.2	34.5	36.6	32.0	22.3	10.7	2.4	
1988	27.4	25.3	17.6	36.8	39.2	35.4	24.2	12.1	2.7	
1989	30.2	28.0	19.3	40.2	43.8	39.1	26.8	13.1	2.9	
1990	32.9	30.6	20.4	44.9	48.2	43.0	29.9	14.5	3.2	
1991	34.6	32.8	21.8	49.6	51.5	44.6	31.1	15.2	3.2	
1992	35.2	33.0	21.6	51.5	52.7	45.4	31.5	16.2	3.6	
1993	35.9	33.6	22.1	52.4	54.2	46.7	32.2	16.4	3.9	

Table 26c. Age-specific Birth Rates for Unmarried Black US Resident Women, 1975, 1980-1993

Rates are births to unmarried women per 1,000 unmarried women in specified group, estimated as of July 1

These data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	Age of Mother									
	15-19 years									
	15-44 years	Total	15-17 years	18-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	
1975	84.2	93.5	76.8	123.8	108.0	75.7	50.0	20.5	7.2	
1980	81.1	87.9	68.8	118.2	112.3	81.4	46.7	19.0	5.5	
1981	79.4	85.0	65.9	114.2	110.7	83.1	45.5	19.6	5.6	
1982	77.9	85.1	66.3	85.1	109.3	82.7	44.1	19.5	5.2	
1983	76.2	85.5	66.8	111.9	107.2	79.7	43.8	19.4	4.8	
1984	75.2	86.1	66.5	113.6	107.9	77.8	43.8	19.4	4.3	
1985	77.0	87.6	66.8	117.9	113.1	79.3	47.5	20.4	4.3	
1986	79.0	88.5	67.0	121.1	118.0	84.6	50.0	20.6	4.4	
1987	82.6	90.9	69.9	123.0	126.1	91.6	53.1	22.4	4.7	
1988	86.5	96.1	73.5	130.5	133.6	97.2	57.4	24.1	5.0	
1989	90.7	104.5	78.9	140.9	142.4	102.9	60.5	24.9	5.0	
1990	90.5	106.0	78.8	143.7	144.8	105.3	61.5	25.5	5.1	
1991	89.5	108.5	80.4	148.7	147.5	100.9	60.1	25.6	5.4	
1992	86.5	105.9	78.0	147.8	144.3	98.2	57.7	25.8	5.4	
1993	84.0	102.4	76.8	141.6	142.2	94.5	57.3	25.9	5.8	

Table 27a. Births per 1000 Employed US Resident Women, 1980-1991

These data came from US Bureau of the Census, Current Population Reports, Population Characteristics, Series P-20, various years

Year	18-44 Years		18-29 Years		30-44 Years	
	Women (thous)	Total births per 1,000	Women (thous)	Total Births per 1,000	Women (thous)	Total Births per 1,000
1980	27,403	37.4	14,337	53.1	13,066	20.2
1981	29,149	40.5	15,085	54.2	14,064	25.9
1982	29,705	41.9	15,095	55.3	14,610	28
1983	30,388	41.4	15,260	57.9	15,128	24.7
1984	32,365	42.6	15,954	58	16,411	27.6
1985	33,034	43.5	15,772	62	17,262	26.6
1986	34,226	46.4	15,974	62.9	18,252	32
1987	35,351	47.1	16,095	68	19,256	29.7
1988	36,143	45.9	16,250	62.5	19,893	32.4
1989						
1990*	38,840	48.8	17,306	65.9	21,534	35
1991						
1992*	38,139	45.0	15,906	60.9	22,233	33.7

Note: * 15-29 Years of Age

Table 27b. Births per 1000 Active Duty Air Force (employed) Women, 1980-1991

Year	17-44 Years		17-29 Years		30-44 Years	
	Women	Total births per 1,000	Women	Total Births per 1,000	Women	Total Births per 1,000
1980	60,764	71.6	54,727	75.7	6,037	34.6
1981	63,391	80.1	55,763	85.3	7,628	42.3
1982	64,652	86.0	55,027	93.6	9,625	43.0
1983	65,575	80.7	54,038	88.3	11,537	45.4
1984	66,708	76.4	53,186	84.8	13,522	43.6
1985	70,287	73.7	54,628	81.7	15,659	45.7
1986	74,033	70.2	56,309	78.8	17,724	42.9
1987	75,723	74.0	55,943	84.6	19,780	44.0
1988	74,745	73.0	53,228	85.1	21,517	43.2
1989	75,524	70.7	52,572	83.2	22,952	42.2
1990*	73,024	74.0	47,516	92.1	25,508	40.3
1991	70,770	72.2	43,855	92.1	26,915	39.8
1992*	66,442	72.2	40,781	90.1	25,661	43.8

Note: * 15-29 Years of Age

Figure 27a. Comparison of Birth Rates for Employed US Women and ADAF Women, 1980-1992

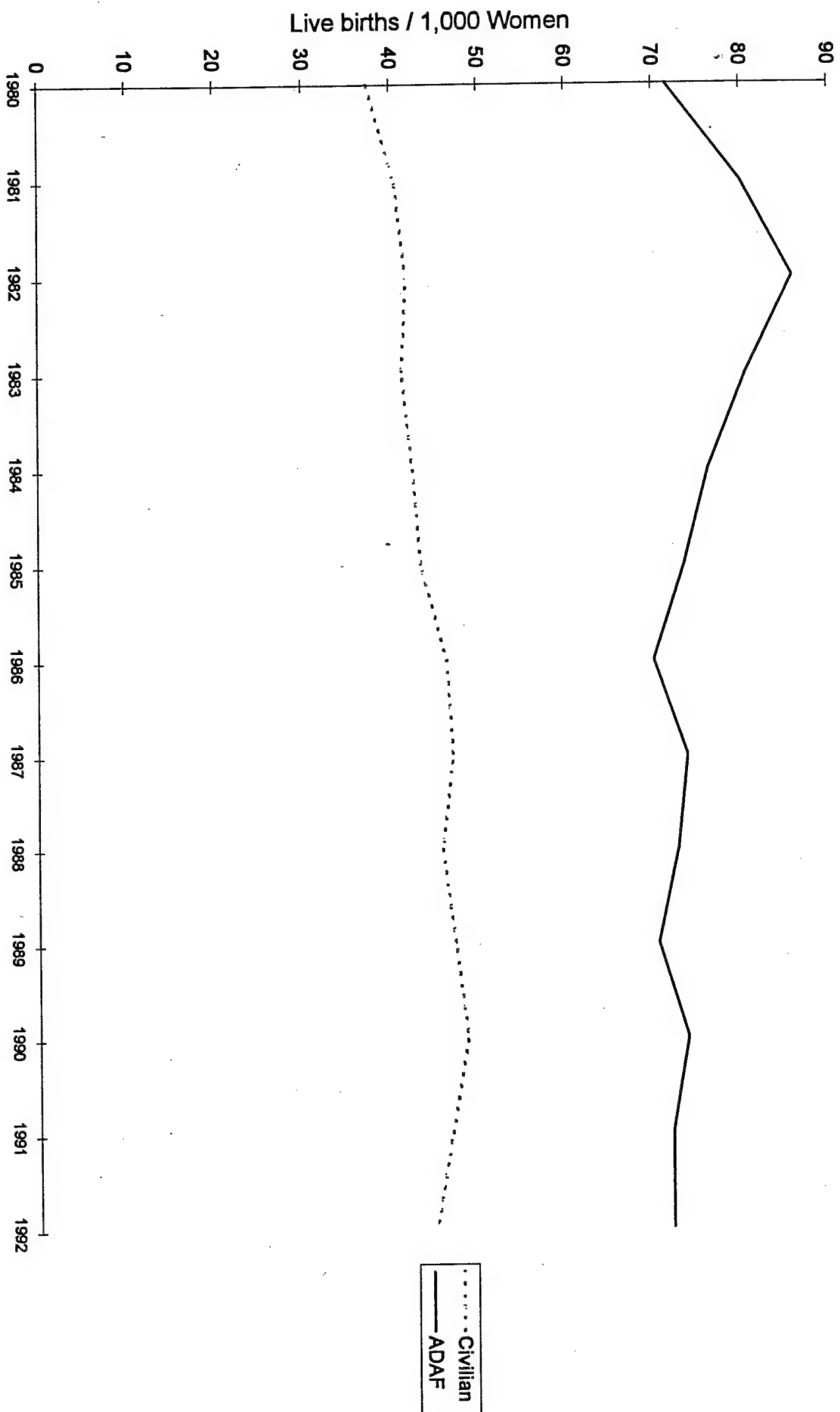


Figure 27b. Ratio of General Fertility Rates for ADAF Women to Employed US Resident Women, by race, 1975-1993

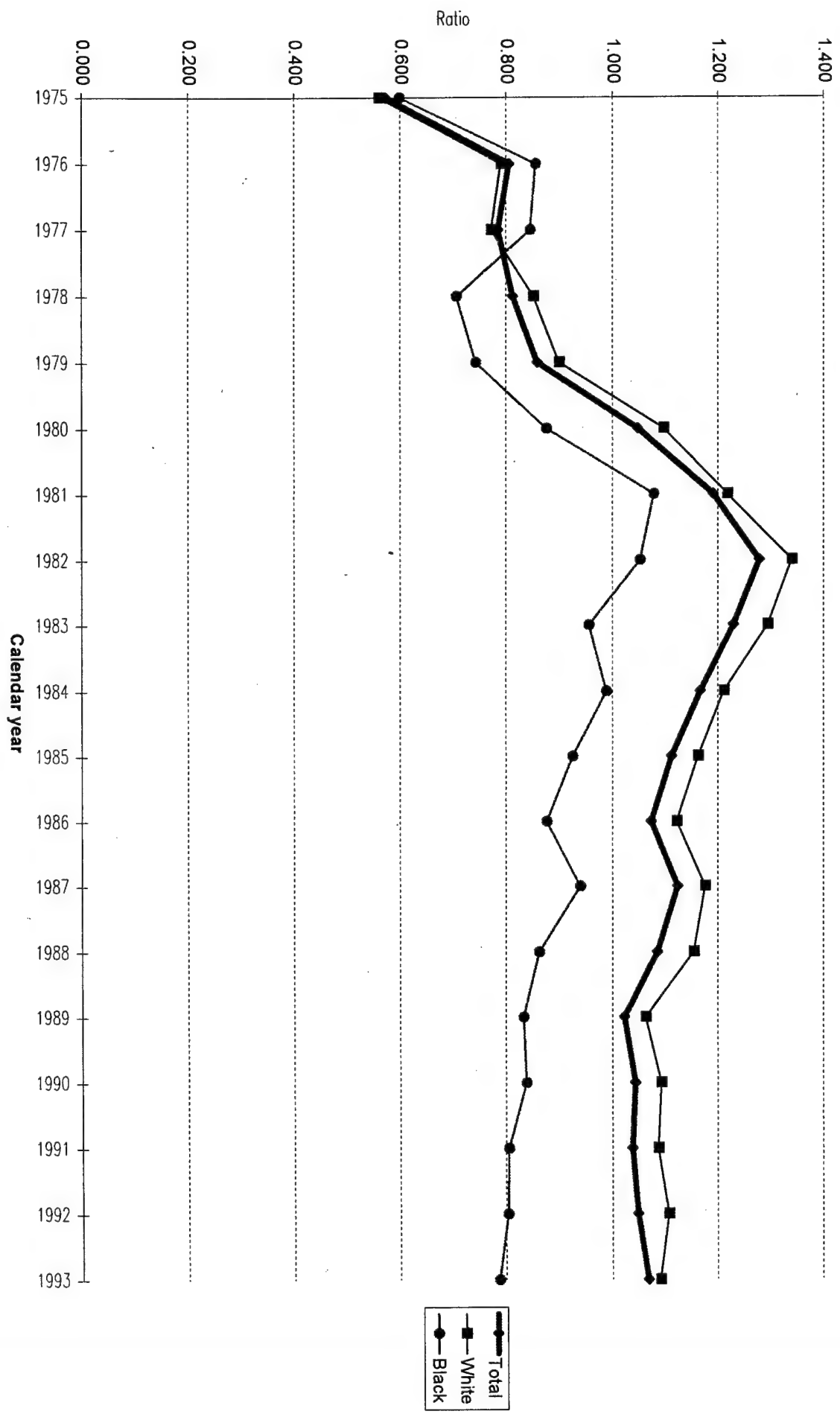


Table 28. General Fertility Rates by Race: United States Resident Women and Active Duty Air Force (ADAF) Women, 1975-1993

General Fertility rates per 1,000 women aged 15-44 years in specified group (US), 17-44 in specified group (ADAF). Population enumerated as of April 1 for census years and estimated as of July 1 for all other years. Beginning with 1970, excludes births to nonresidents of the United States. US data came from the NCHS Monthly Vital Statistics Report, Vol. 44, No. 3(S), 21 SEP 95

	US General Fertility Rate			ADAF General Fertility Rate		
	All Races		Black	All Races		Black
	White	Black		White	Black	
1975	66.0	62.5	87.9	37.8	35.0	52.6
1976	65.0	61.5	85.8	52.3	48.6	73.4
1977	66.8	63.2	88.1	52.4	48.8	74.5
1978	65.5	61.7	86.7	53.2	52.5	61.2
1979	67.2	63.4	88.3	57.7	57.1	65.6
1980	68.4	65.6	84.7	71.6	71.9	74.1
1981	67.3	64.8	82.0	80.1	78.9	88.4
1982	67.3	64.8	80.9	86.0	86.8	85.1
1983	65.7	63.4	78.7	80.7	82.0	75.2
1984	65.5	63.2	78.2	76.4	76.6	77.3
1985	66.3	64.1	78.8	73.7	74.5	72.9
1986	65.4	63.1	78.9	70.2	70.8	69.2
1987	65.8	63.3	80.1	74.0	74.4	75.2
1988	67.3	64.5	82.6	73.0	74.4	71.3
1989	69.2	66.4	86.2	70.7	70.6	71.8
1990	70.9	68.3	86.8	74.0	74.6	72.7
1991	69.6	67.0	85.2	72.2	72.8	68.6
1992	68.9	66.5	83.2	72.2	73.6	66.9
1993	67.6	65.4	80.5	72.2	71.3	63.3

Figure 28a. General Fertility Rate, US & ADAF by Race, 1975-1993

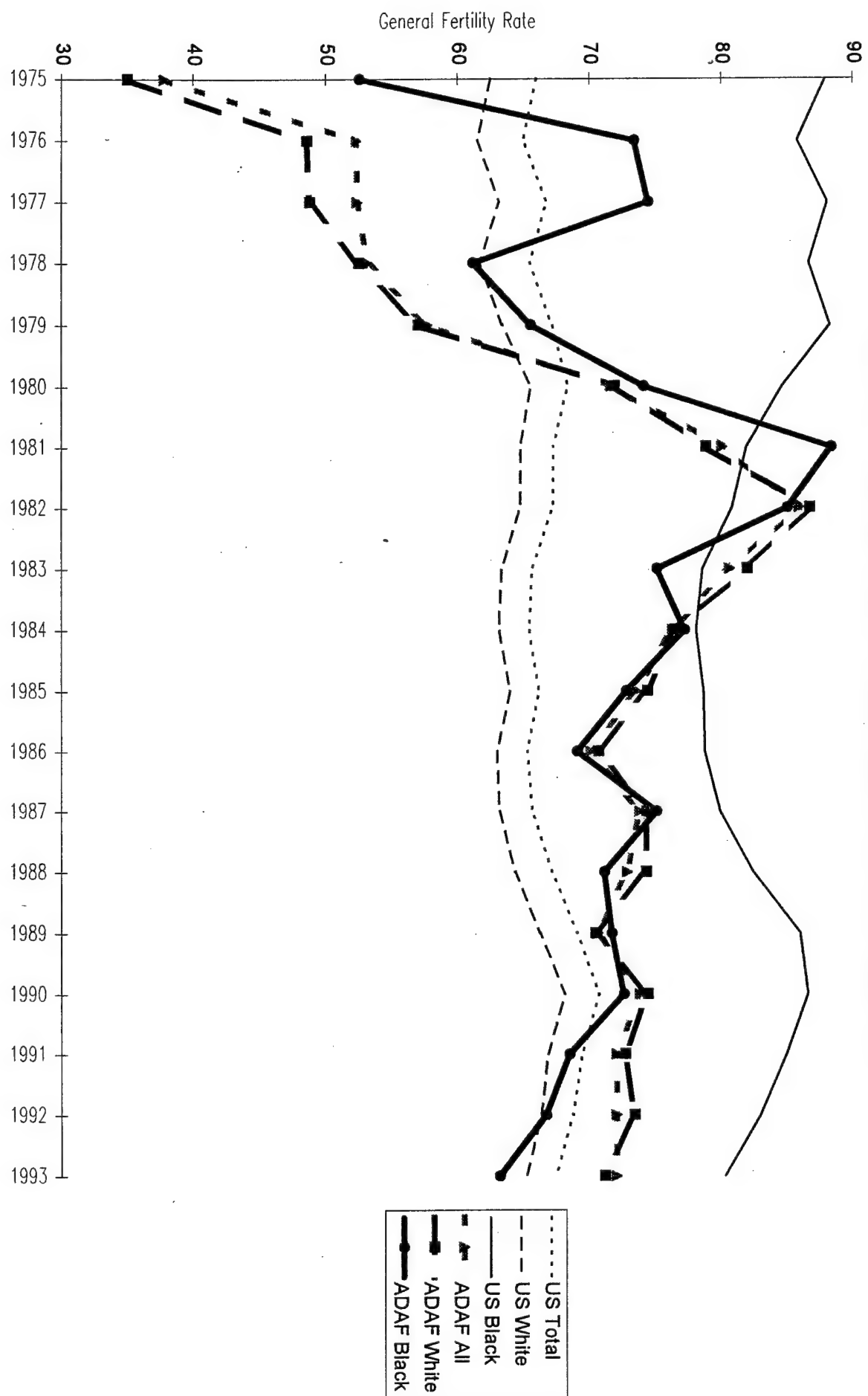


Figure 28b. Ratios of ADAF to US Age-specific Fertility Rates for Women ages 20-24 to 30-34 and Total Fertility Rate for ages 20-34, 1975-1993

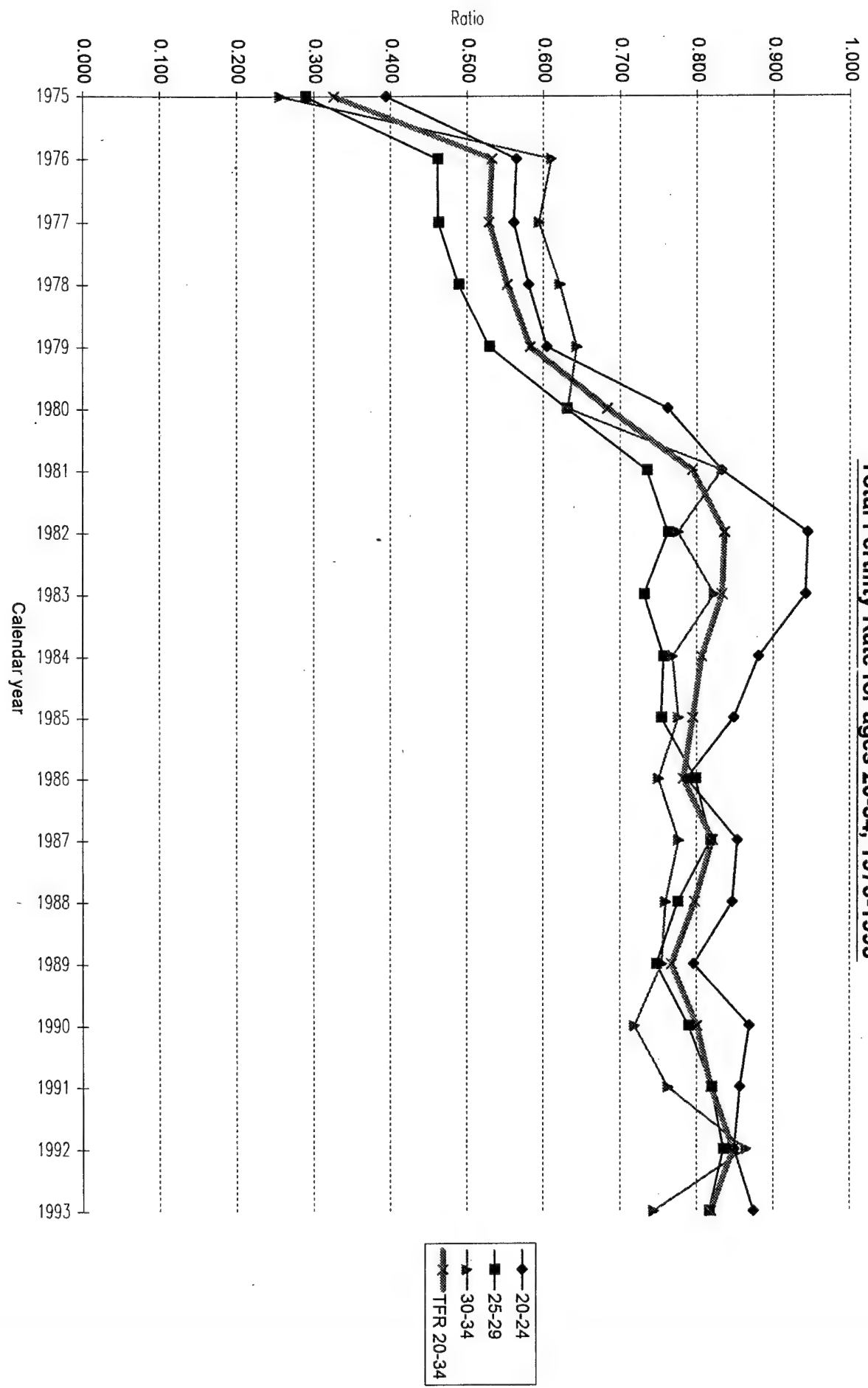
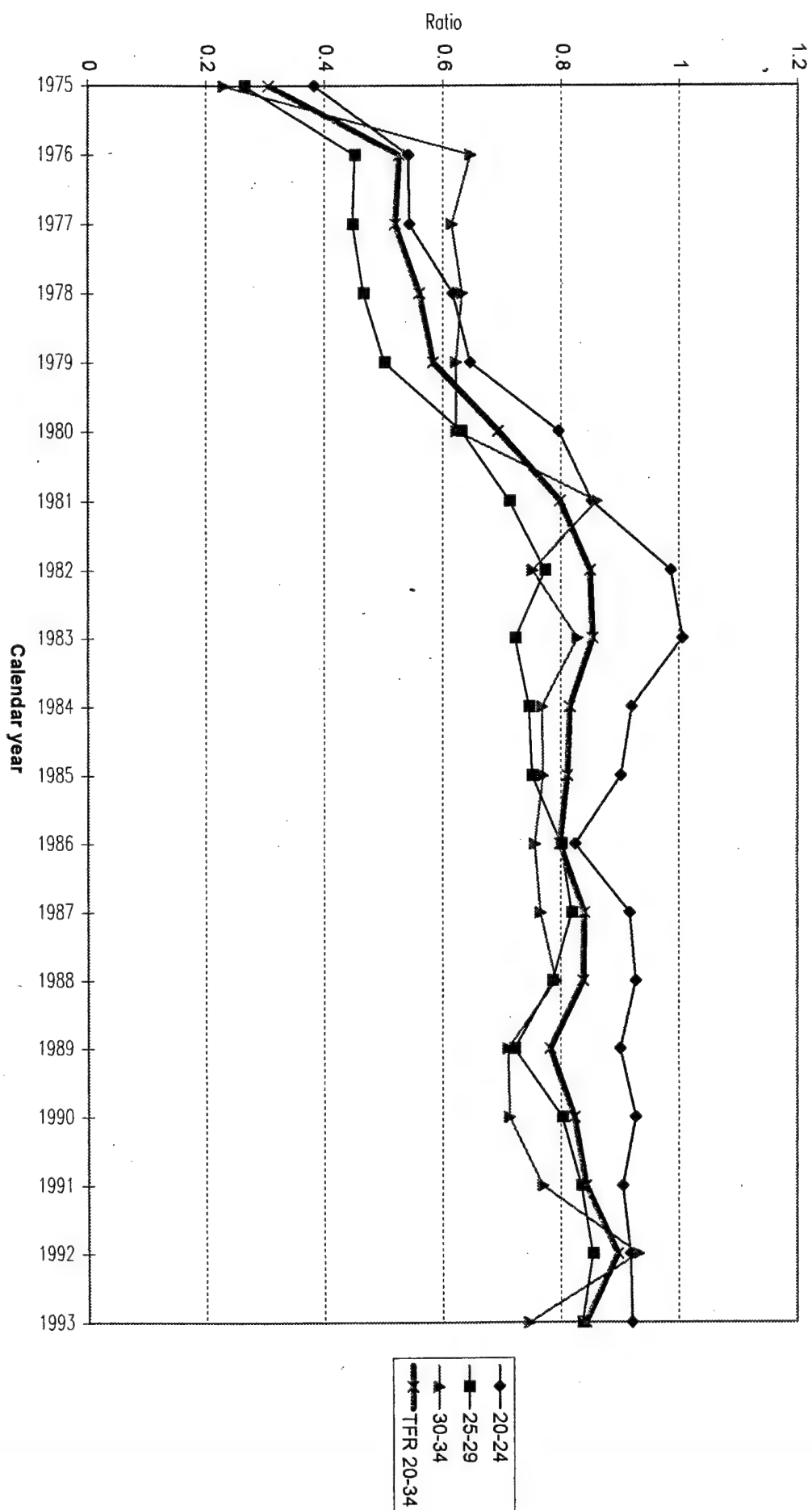
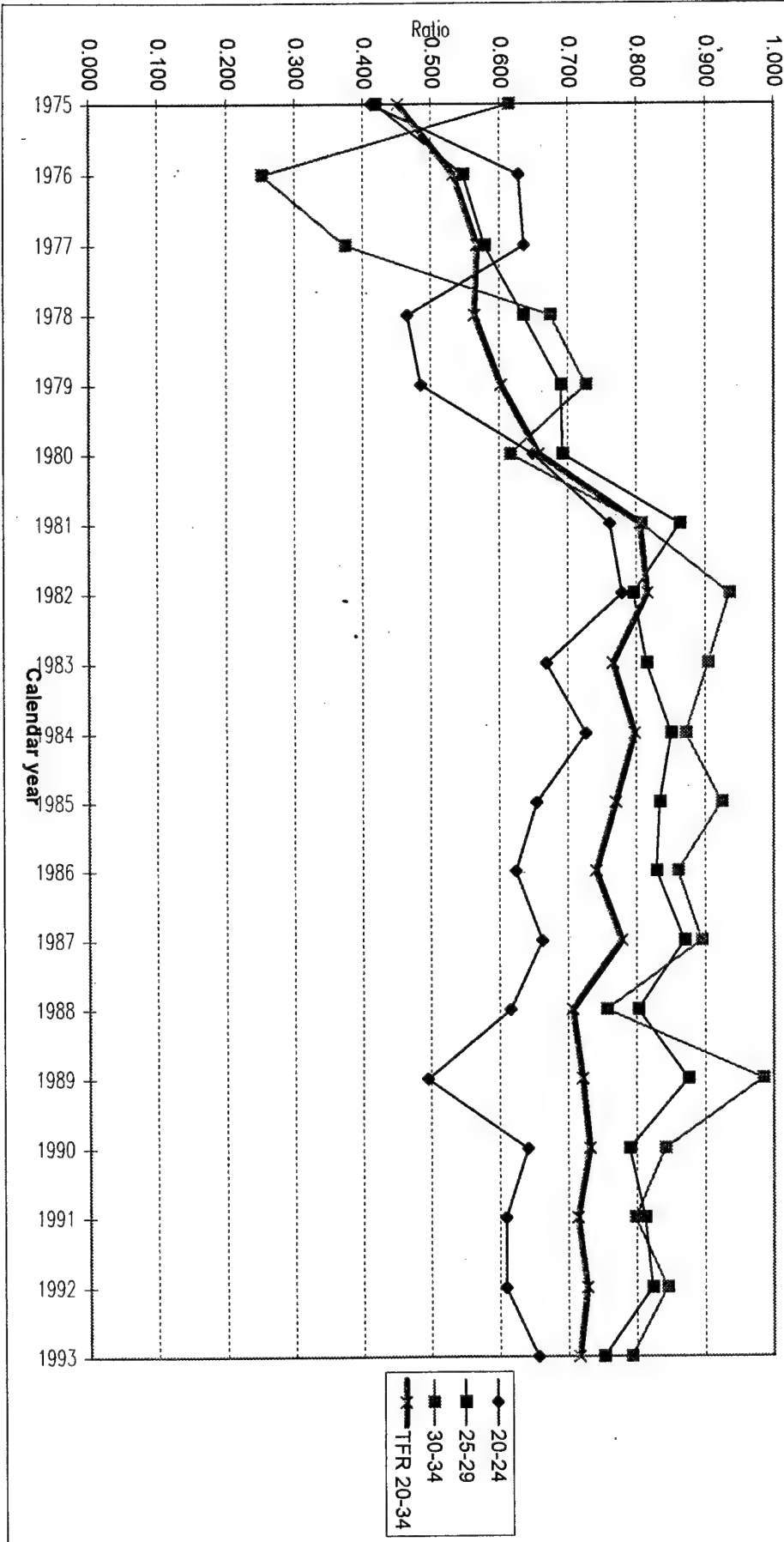


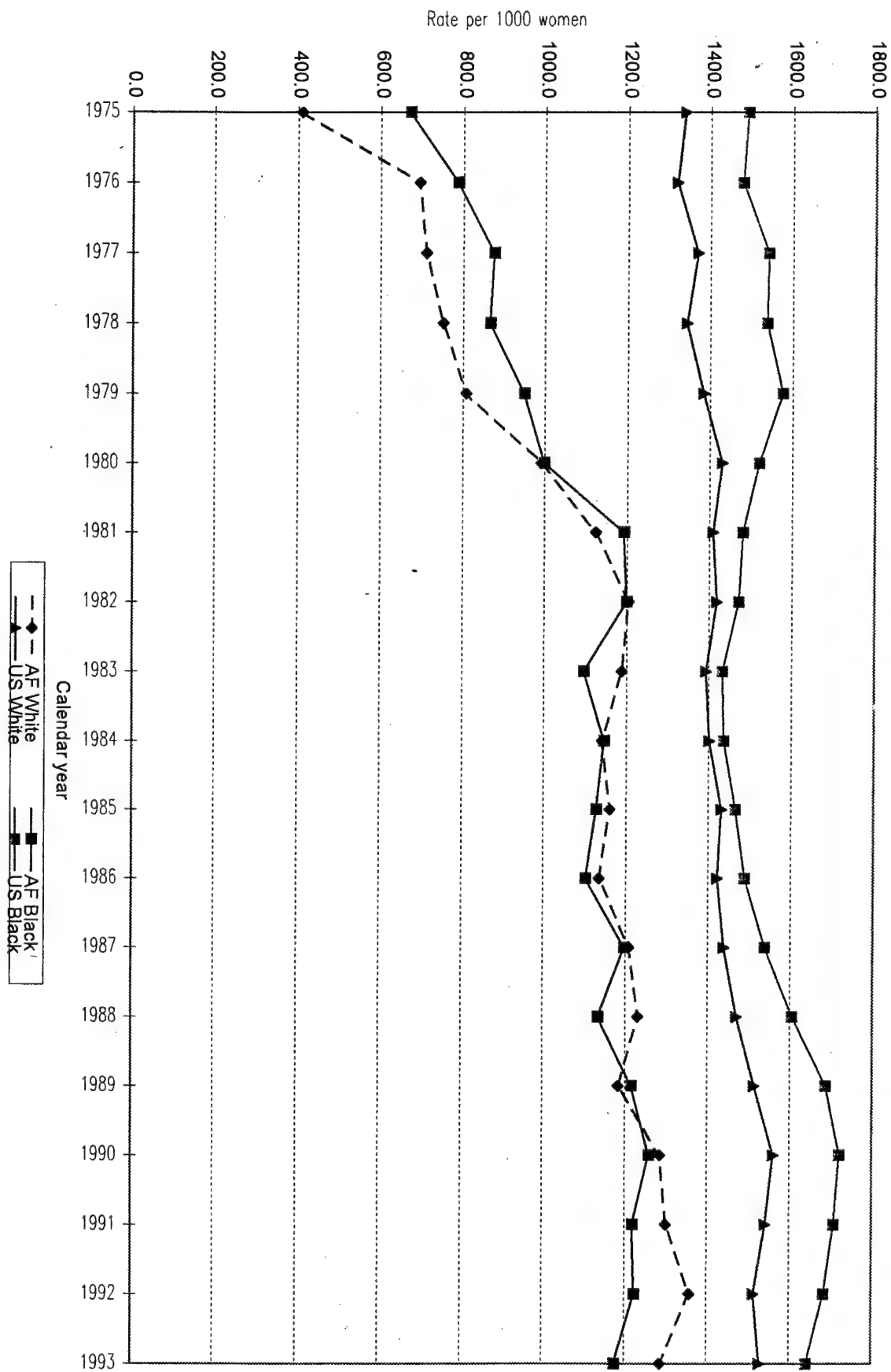
Figure 28c. Ratios of ADAF to US Age-specific Fertility Rates for White Women ages 20-24 to 30-34 and Total Fertility Rate for ages 20-34, 1975-1993



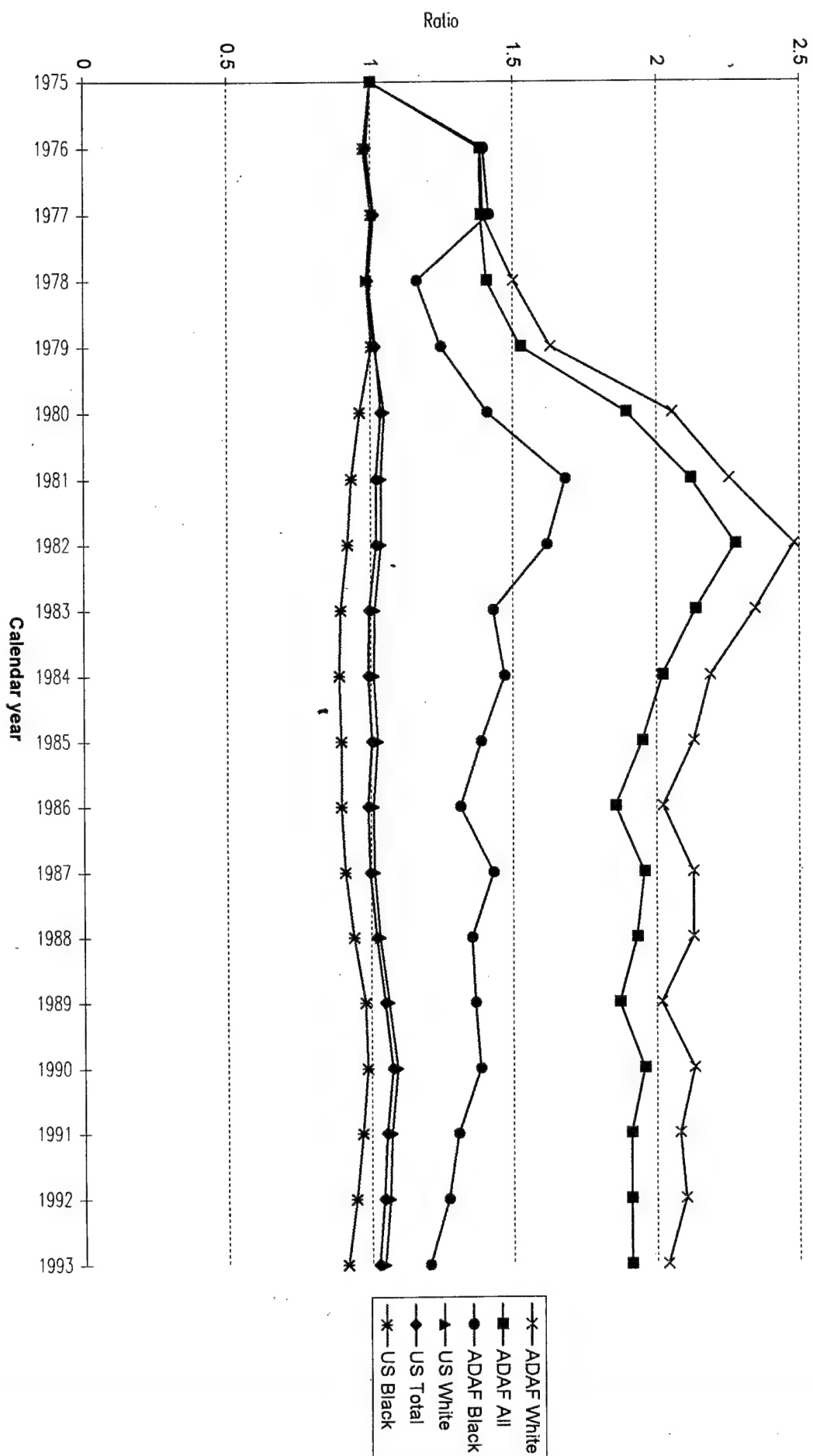
**Figure 28d. Ratios of ADAF to US Age-specific Fertility Rates for Black Women
ages 20-24 to 30-34 and Total Fertility Rate for ages 20-34, 1975-1993**



**Figure 28e. Truncated Total Fertility Rates (ages 20-34)
for US and ADAF Women, by race, 1975-1993**



**Figure 28f. Ratio of General Fertility Rate by calendar year to Rate in 1975, by race,
US and ADAF Women, 1975-1993**



References

- Adams MM, Read JA, Rawlings JS, et al. Preterm delivery among Black and White enlisted women in the United States Army. *Gynecol* 1993; 81: 65-71.
- Ahlborg G, Herurninki K. Reproductive effects of chemical exposures in health professions. *J Occup Environ Med* 1995;37:957-961.
- Ahlborg G. Physical work load and pregnancy outcome. *J Occup Environ Med* 1995; 37: 941-944.
- Alexander GR, Baruffi G, Mor JM, et al. Multiethnic variations in the pregnancy outcomes of military dependents. *Am J Public Health* 1993;83: 1721-1725.
- Antilla A, Sallmen M. Effects of parental occupational exposure to lead and other metals on spontaneous abortion. *J Occup Environ Med* 1995;37:915-921.
- Airman Classification Manual (AFMAN 36-2108, App. 41), USAF.
- Bachu, A. Fertility of American Women: June 1992, U.S. Bureau of the Census. Current Population Reports, P20-470. Washington, DC: U.S. Government Printing Office; 1993.
- Baird DD, Wilcox AJ, Weinberg CR. Using time of pregnancy to study environmental exposures. *Am J Epidemiol* 1986; 124:361-374.
- Berkowitz G. An epidemiologic study of preterm delivery. *Am J Epidemiol* 1981; 113:81-91.
- Birdsong WM. Ectopic pregnancy in a military population. *Mil Med* 1987; 152:525-526.
- Bogue DI. The Population of the United States. Historical Trends and Future Projections. New York: The Free Press; 1987.
- Brandt LPA, Neilsen CV. Job stress and adverse outcomes of pregnancy: a causal link or recall bias. *Am J Epidemiol* 1992;135:302-311.
- Buttemiller R. Prematurity among United States Air Force active-duty gravidas. *Mil Med* 1984; 149:665-668.
- DoD 1312.1-I, Occupational Conversion Index (Enlisted/Officer/Civilian), September 1993, NTIS, Springfield, VA 22161
- Defense Equal Opportunity Management Institute Semi-Annual Occupational Profile of Minorities and Women in the Department of Defense, Statistical Series Pamphlet No. 96-3. Patrick AFB Florida: March 1996.

Echeverria D, White RF, Sampaio C. A behavioral evaluation of PCE exposure in patients and dry cleaners: A possible relationship between clinical and preclinical effects. *J Occupational and Env Med* 1995;37(6):667-680.

Eskenazi B, Bracken MB, Holford TR. Exposure to organic solvents and hypertensive disorders of pregnancy. *Epidemiology* 1988; 14: 177-188.

Eskenazi B, Fenster L, Wight S, et al. Physical exertion as a risk factor for spontaneous abortion. *Epidemiology* 1994;5:6-13.

Florack EIM, Zielhuis GA, Pellegrino JEMC, Rolland R. Occupational physical activity and the occurrence of spontaneous abortion. *Int J Epidemiol* 1993;22:878-884.

Fox ME, Harris RE, Brekken AL. The active-duty military pregnancy: a new high-risk category. *Am J Obstet Gynecol* 1977; 129: 705-707.

Gold EB, Tomich E. Occupational hazards to fertility and pregnancy outcome. *Occup Med* 1995; 9:435-469.

Hoiberg A, White JF. Health Status of Women in the Armed Forces. San Diego, CA: Naval Health Research Center; 1992 (Report # 89-37).

Homer CJ, James SA, Siegel E. Work-related psychosocial stress and risk of preterm low birthweight delivery. *Amer J Public Health* 1990;80: 173-177.

Irwin DE, Savitz DA, St Andre KA, et al. Study of occupational risk factors for pregnancy - induced hypertension among active duty enlisted Navy personnel. *Am J Indust Med* 1994; 25:349-359.

Joffe M. Biases in research on reproduction and women's work. *Int J Epidemiol* 1985; 14: 118-123.

Koch GG, Edwards S. Logistic Regression. In: Kotz S, Johnson NL, and Reed CB (Eds) *Encyclopedia of Statistical Sciences*. Vol 5, pp. 128-133. New York: Wiley; 1985.

Koemeester AP, Broersen JPJ, PE Treffers. Physical work load and gestational age at delivery. *Occup Environ Med* 1995;52:313-315.

Kugler JP, Connell FA, Henley CE. Lack of difference in neonatal mortality between Blacks and Whites served by the same medical care system. *J Fam Prac* 1990; 30:281-287.

Kruger PS. Risk factors and pregnancy outcome among Air Force women. *Mil Med* 1979; 144:788-791.

Lindbohm M-L. Effects of parental exposure to solvents on pregnancy outcome. *J Occup Environ Med* 1995;37:908-914.

Lindbohm M-L, Taskinen H, Sallmen M, et al. Spontaneous abortions among women exposed to organic solvents. *American J Ind Med* 1990; 17: 449-463 .

Magann, EF, Nolan, TE. Pregnancy outcome in an active duty population, *Obstet Gynecol* 1991; 78: 392-393.

Mamelle N, Laumon B, Lazar P. Prematurity and occupational activity during pregnancy. *Am J Epidemiol* 1984; 119:309-322.

Marcoux S, Brisson J, Fabia J. The effect of leisure time physical activity on the risk of pre-eclampsia and gestational hypertension. *J Epidemiol Community Health* 1989;43:147-152.

Messersmith-Heroman K, Heroman W. Pregnancy outcome in military and civilian women. *Mil Med* 1994; 159:8:577-579.

Military Women in the Department of Defense, April 1983, 46 pages, Defense Technical Information Center, Cameron Station, Alexandria, VA 22304-6145

Murphy JF, Dauncey M, Newcombe R. Employment in pregnancy: prevalence, maternal characteristics, perinatal outcome. *Lancet* 1984;1:1163-1166.

Nurminen T. Female noise exposure, shift work, and reproduction. *J Occup Environ Med* 1995; 37:945-951.

National Defense Authorization Act (NDAA) 1992-1993. Policy statement Les Aspin, Secretary Defense, 28 April, 1993.

National Center for Health Statistics. Health, United States, 1995. Hyattsville, Maryland: Public Health Service, 1996.

National Center for Health Statistics. Vital Statistics of the United States, 1989. Vol. 1, Natality, Table 1-9. Washington, DC: U.S. Government Printing Office; 1993. (DHHS Pub No. (PHS) 93- 1100).

National Center for Health Statistics. Vital Statistics of the United States, 1989. Vol. 1, Natality, Table 6-13. Washington, DC: U.S. Government Printing Office; 1993. (DHHS Pub No. (PHS) 93-1100).

Ng TP, Foo SC, Young T. Risk of spontaneous abortion in workers exposed to toluene. *Br J Indus Med* 1992;49:804-808.

Operation Desert Storm, Questions Remain on Possible Exposure to Reproductive Toxicants. Report to the Chairman, Committee on Veteran's Affairs, US Senate, US General Accounting Office, August, 1994.

Poindexter, G.W. A Step Back for Women. Air Force Times 15 August 1994:8.

Ramirez G, Grimes RM, Annegers JF, Davis BR, Slater CH. Occupational physical activity and other risk factors for preterm birth among US Army primigravidas. Am J Public Health 1990; 80:728-729.

Rothberg, JM. Epidemiologic Considerations Regarding the Health and Effectiveness of Women in the Armed Forces. Washington, DC: Walter Reed Army Institute of Research, 1984 (WRAIR/TR-94-0004)

Rothberg JM. Epidemiological Considerations Regarding the Health and Effectiveness of Women in the Armed Forces. Washington, DC: Walter Reed Army Institute of Research; 1984 (WRAIR/TR-94-0004).

Saurel-Cubizolles MJ, Kamiski M, LLado-Arkipoff J, et al. Pregnancy and its outcome among hospital personnel according to occupation and working conditions. J Epidemiol Community Health 1985;39:129-134.

Savitz DA, Whelan EA, Rowland AS, Kleckner RC. Maternal employment and reproductive risk factors. Am J Epidemiol 1990; 132:933-945.

Schlesselman JJ. Case-control studies. Design, conduct, analysis, pp. 200-206. New York: Oxford University Press; 1982.

Sever LE. Congenital malformations related to occupational reproductive hazards. Occup Med 1994;9:471-494.

Sever LE, Mortensen ME. Teratology and the epidemiology of birth defects: environmental and occupational perspectives. In: Gabbe SG, Niebyl JR, Simpson JL, eds. Obstetrics: Normal and Problem Pregnancies, Third Edition. Churchill Livingstone, New York (In Press); 1995.

Shryock, HS, Siegel, JS. Studies in Population. The Methods and Materials of Demography. New York: Academic Press; 1976.

Stengel B, Saurel-Cubizolles M-J, Kamiski M. Healthy worker effect and pregnancy: role of adverse obstetric history and social characteristics. J Epidemiology and Community Health 1987;41 :312-20.

Taffel, SM. Health and Demographic Characteristics of Twin Births: United States, 1988. National Center for Health Statistics. Vital Health Stat 21(50), 1992.

Taylor PR, Lawrence CE, Hwang K-L, et al. Polychlorinated biphenyls: influences on birthweight and gestation. Amer J Public Health 1984;1153-1154.

Teitelman AM, Welsh LS, Hellenbrand KG, et al. Effect of maternal work activity on preterm birth and low birth weight. Amer J Epidemiol 1990;131:104-113.

Thomas PJ, Edwards JE. Incidence of Pregnancy and Single Parenthood among Enlisted Personnel in the Navy. San Diego, CA: Navy Personnel Research and Development Center; 1989 (NPRDC TR 90-1).

US Bureau of the Census. Current Population Reports, P25, No 917, Preliminary Estimates of the Population of the United States by Age, Sex, Race, and Hispanic Origin: 1970 to 1981. US Government Printing Office, Washington, DC, 1982.

US Bureau of the Census. Current Population Reports, P25-1092, Population Projections of the United States by Age, Sex, Race, and Hispanic Origin: 1992-2020. US Government Printing Office, Washington, DC, 1992.

US Bureau of the Census. Current Population Reports, P25-1095, US Population Estimates by Age, Sex, Race, and Hispanic Origin: 1980 to 1991. US Government Printing Office, Washington, DC, 1993.

USAF Almanac 1997, Air Force Association Magazine Volume 80 (5):31, 1997.

Water TR, Putz-Anderson, V Garg A, Fine LJ. Revised NIOSH equation for the design and evaluation of manual lifting tasks. Ergonomics 1993;36:7:749-776.

Weiss NS. Should We Consider a Subject's Knowledge of the Etiologic Hypothesis in the Analysis of Case-Control Studies? Am J Epidemiol 1994; 139:247-249.

Zhang J, Cal W, Lee DJ. Occupational hazards and pregnancy outcomes. Amer J Ind Med 1992;21 :397-408.

Appendix

Appendix A

Phase II Case-Control Study

- 1. Enumeration of Reproductive Events A-2**
- 2. Case-definition A-6**
- 3. Case-Distribution between 1990-1994 A-7**
 - By Age**
 - Race**
 - Rank**
 - Major Command**
 - Region**
 - Job**
 - State**
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Appendix B

List of Publications, Abstracts, and Personnel A-10

Phase II: Case-Control Study

The primary source of case-control data was the reproductive data set maintained by the Air Force Medical Support Agency (AFMSA) Standard Inpatient Record (SIDR), an existing database which contains records for all admissions to USAF medical facilities since 1970. Drs. Herbold and Grayson obtained the data set from the Air Force. For the purposes of planning the case-control study we elected to conduct a preliminary review of the cases (without personnel identifiers) in order to determine the number of events available from 1990 to 1994, the number of events from which cases will be selected between 1990-1994, and their distribution by important demographic factors. The final cases will be selected from a subset of years from 1990-1996 where the data for 1995 and 1996 have just become available and remain to be extracted from the SIDR.

This section briefly describes (1) the enumeration of events from which cases will be selected, (2) the distribution of cases for pertinent factors, (3) the status of the industrial hygiene assessments, and (4) the status of the medical extraction and CATI interviews.

1. Enumeration of Reproductive Events

During Year 1, we elected to conduct a preliminary assessment of cases without personnel identifiers in order to determine the number of events available, the number of events from which cases will be selected between 1990-1994, and their distribution by key demographic factors.

On October 1 1996, Battelle initiated the generation of data files by first requesting the reproductive numerator data be extracted from the AFMSA database. The extraction process took 5 months and we received the numerator data in March, 1997. The 20-year old AFMSA SIDR tape files for reproductive events were extracted by John Mellman, the Statistical Consultant and Database Manager from Armstrong Laboratory, Brooks AFB, Texas. The condition of the tapes was variable and the 5 month time was used to locate, splice together, and upload and recreate files on the mainframe. The events were entered as hospitalizations hence there were multiple entries for one event. By July 1997, research staff at the University of Texas had reviewed the data set for errors and produced the ADAP_WOMEN_EVENT.dbf datafile described in Exhibit 1 on the following pages.

The tabulations located in Exhibit 2, show that there were 96,934 events. A surprisingly small proportion were problematic, attributable either to improbable dates ($n = 402$ or .4%) or contradictions between V and P codes ($n = 175$ or .2%). These small number of entries were eliminated from the descriptive studies but are maintained in the case-control study as we will be able to recode problematic cases (if any) using the medical record for each individual.

As seen previously on Section B.1 on page 22 of the draft report, a thorough review of the quality of the event data indicated that the coding schema by ICD varied over time. In order to standardize the natality rate over a 20 year time period, three categories of coded records were selected; those with both a Presentation of Fetus "P" Code and supplemental "V27" Code ($n = 55,057$), those with a V Code alone ($n = 9,454$), and those with a P Code alone ($n = 22,423$).

The breakdown by singleton, twin, and multiple births indicated that most of the database described singleton birth-alive events ($n = 85,557$ or 98%).

The numerator data was previously described in greater detail in the draft report, but note that the numbers are significantly lower in the first 5 year period between 1975 and 1979. This is because Presentation of Fetus Codes were the only codes used during this period of time. The change in coding stabilized over the remaining 15 years of time up to 1994.

Describing the same dataset by ADAF mother yielded 64,859 individual women with a small proportion of problematic events. The breakdown of events by number of births also indicated that the overall study is primarily focusing on singleton births.

Exhibit 1 Structure for database: ADAF_WOMEN_EVENT.DBF (n = 86,934)

1	StudyID	Numeric	5	
2	PROBDATES	Character	1	1=<=5 days, 2=6-299 days between pregnancies
3	CONTRA	Character	1	1=V or P code missing, 2=contradiction, single/twin 3=contradiction, multiple,
4	COMB_NUM	Character	2	Number of fetuses in birth alive/dead using V and P codes
5	V_NUM	Character	2	As above, using only V code
6	P_NUM	Character	2	As above, using only P code
7	VCODE1	Character	1	Coded 1st V-code
8	VCODE2	Character	1	Coded 2nd V-code
9	VCODE3	Character	1	Coded 3rd V-code
10	PCODE1	Character	1	Coded 1st P-code
11	PCODE2	Character	1	Coded 2nd P-code
12	VCODETOT	Character	1	Combined Coded V-code -codes (coded)
13	PCODETOT	Character	1	Combined Coded P-code -codes (coded)
14	TOTCODE	Character	2	V and P combined codes (coded)
15	BIRTHREC	Character	1	1=Vcode alone, 2=Pcode alone, 3=both
16	BIRTHDATE	Date	8	
17	ADMDATE	Date	8	
18	DISPDATE	Date	8	
19	SOURCE	Numeric	1	
20	GENERAT	Character	1	
21	FPREFIX	Numeric	2	
22	MTF	Character	5	
23	ADM_YR	Numeric	4	
24	ADM_MO	Numeric	2	
25	ADM_DAY	Character	2	
26	DISP_YR	Numeric	4	
27	DISP_MO	Numeric	2	
28	DISP_DAY	Character	2	
29	BIRTHYR	Character	4	
30	BIRTHMO	Character	2	
31	BIRTHDAY	Character	2	
32	ADM_AGE	Character	3	
33	SEX	Character	1	
34	RACE	Character	1	
35	OFF_ENL	Character	1	
38	JOB_CODE	Character	4	
39	SERVICE	Character	3	
40	MAJCOM	Character	3	
41	DUTY_ZIP	Character	5	
42	BENEFIT	Character	3	
43	DIAG_IND	Numeric	1	
44	ICDDIAG1	Character	5	
45	ICDDIAG2	Character	5	

46	ICDDIAG3	Character	5
47	CAUSEDTH	Character	5
48	DTHPOINT	Character	1
49	P_FETUS1	Character	2
50	P_FETUS2	Character	2
51	SICKDAYS	Numeric	5
52	BEDDAYS	Numeric	5
53	DISPTYPE	Character	2
54	DISPSERV	Character	3
55	REC_TYPE	Numeric	1
56	RECORDID	Numeric	8
57	KEEPER	Numeric	2
58	DUMMY	Numeric	2
59	ADM_DY	Numeric	2
60	DISP_DY	Numeric	2
61	B_YR	Numeric	4
62	B_MO	Numeric	2
63	B_DY	Numeric	2
64	TEMP	Character	3
65	AGE	Numeric	2
66	RANK	Numeric	2
67	AFSC	Character	3
68	JOB_GRP	Numeric	2
69	FLAG	Numeric	9
70	TIMEIN	Numeric	5
71	AGEGRP	Numeric	1
72	PFBIRTH	Numeric	2
73	BIRTHTYP	Numeric	2
74	BIRTH_A	Numeric	1
75	BIRTH_B	Numeric	1
76	BIRTH_C	Numeric	1
77	BABY_CNT	Numeric	2
78	BODY_CNT	Numeric	2
79	ABORT	Numeric	1
80	CENSUS	Numeric	2
81	MAJCOMGP	Numeric	2
82	PRETERM	Numeric	2
83	HYPER	Numeric	2
84	MAPTERM	Numeric	2
85	REGION	Character	5
86	CENGRP	Numeric	9
* Total **			238

Exhibit 2**ADAF BIRTHS BY "EVENT"**

<u>TOTAL IDENTIFIED EVENTS</u>	86,934
<u>DISTRIBUTION OF PROBLEMATIC EVENTS</u>	
EVENTS WITH POSSIBLE PROBLEM DATES	402
SAME SUBJECT ADMISSIONS WITHIN 5 DAYS	242
SAME SUBJECT ADMISSIONS BETWEEN 5-300 DAYS	160
CONTRADICTIONS BETWEEN V & P CODES	173
FOR SINGLETON & TWIN BIRTHS (BY V CODE)	169
FOR HIGHER MULTIPLE BIRTHS (BY V CODE)	4
CONTRADICTIONS - MULTIPLE V CODES	2
<u>DISTRIBUTION OF EVENTS BY CODES</u>	
IDENTIFIED BY BOTH V AND P CODES:	55,057
IDENTIFIED BY V CODES ALONE:	9,454
IDENTIFIED BY P CODES ALONE:	22,423
<u>DISTRIBUTION OF EVENTS BY NUMBER OF BIRTHS</u>	
SINGLETON BIRTH-ALIVE:	85,557
SINGLETON BIRTH-DEAD:	528
TWIN BIRTH-BOTH ALIVE:	788
TWIN BIRTH-ONE ALIVE:	29
TWIN BIRTH-NONE ALIVE:	21
MULTIPLE BIRTH-ALL ALIVE:	6
MULTIPLE BIRTH-SOME ALIVE:	1
MULTIPLE BIRTH-NONE ALIVE:	4
<u>DISTRIBUTION OF EVENTS BY 5-YEAR INTERVALS</u>	
<1975:	41
1975-79:	11,019
1980-84:	25,385
1985-89:	26,699
1990-94:	23,790
<u>TOTAL INDIVIDUAL WOMEN:</u>	64,859
<u>DISTRIBUTION OF PROBLEMATIC EVENTS</u>	
INDIVIDUALS WITH POSSIBLE DATE PROBLEMS:	200
SAME SUBJECT ADMISSIONS WITHIN 5 DAYS:	121
SAME SUBJECT ADMISSIONS BETWEEN 5-300 DAYS:	79
<u>DISTRIBUTION OF EVENTS BY NUMBER OF BIRTHS</u>	
WOMEN WITH ONLY ONE BIRTH EVENT:	46,145
WOMEN WITH ONLY TWO BIRTH EVENT:	15,803
WOMEN WITH ONLY THREE BIRTH EVENT:	2,525
WOMEN WITH ONLY FOUR BIRTH EVENT:	332
WOMEN WITH ONLY FIVE BIRTH EVENT:	46
WOMEN WITH ONLY SIX BIRTH EVENT:	7
WOMEN WITH ONLY SEVEN BIRTH EVENT:	0
WOMEN WITH ONLY EIGHT BIRTH EVENT:	1

2. Case-definition

Exhibit 3

Adverse Reproductive Outcomes in Active Duty Airforce Women

Outcome	ICD-9-CM Definition	ICD-9-CM Codes
Ectopic Pregnancy	Abdominal pregnancy	633.0
	Tubal pregnancy	633.1
	Ovarian pregnancy	633.2
	Other ectopic pregnancy	633.8
	Unspecified ectopic pregnancy	633.9
Spontaneous Abortion	Miscarriage	634.0-634.9
	Spontaneous abortion	
Placenta Previa	Placenta previa without hemorrhage	641.0 (0,1,3)
	Hemorrhage from placenta previa	641.1 (0,1,3)
Premature Separation of Placenta	Premature separation of placenta (abruptio placentae)	641.2 (0,1,3)
Pregnancy-induced Hypertension	Mild or unspecified pre-eclampsia	642.4
	Severe pre-eclampsia	642.5
	Eclampsia	642.6
Preterm Delivery	Early onset of delivery – Before 37 completed weeks of gestation	644.2
Cesarean Delivery	Cesarean delivery, without mention of indication	669.7 (0,1)

Exhibit 3 provides the range of ICD codes that define several outcomes of research interest. The primary outcomes evaluated in the case-control study are spontaneous abortion, pre-term delivery, and pregnancy induced hypertension. Crude Rates per 100,000 Population for Early Onset of Delivery, Pregnancy-Induced Hypertension (Pre-eclampsia/Eclampsia), and Spontaneous Abortion for ADAF Women (1990-1993) are presented below.

	Calendar Year				
	1990	1991	1992	1993	1990-1993
Early onset of delivery	739.4	692.7	841.1	894.3	791.88
Pregnancy Induced Hypertension	577.6	534.6	557.3	488.7	539.55
Spontaneous Abortion	439.0	386.3	349.2	276.9	362.85

The distribution of these three adverse outcomes are examined below.

3. Case-Distribution for (1970-1994) and (1990-1994) by Calendar Years, Age, Race, Rank, Major Command, Region, Job, US State

The following set of tables located in Exhibit 4 describe the coding and distribution of spontaneous abortions (SPONAB), birth events (EVENT), pre-term delivery (PRETERM), and pregnancy induced hypertension (HYPERTEN) for the total data set over 20 years (TOTAL) and are repeated for the sub-set of years (1990-1994).

Over the 20 year period of time, there is a drop in cases as of 1990, attributable to a reduction in the work force. Also consistent with underlying demographic distributions, the number of cases is greatest between the ages of 20 and 29 years old, primarily under the Major Command labeled "Operations" as opposed to training and logistic commands. Also there are very few cases from outside the continental USA. Though these are raw numbers and not rates, note that race is considered a potential risk factor for these outcomes and is also included here.

The distribution of cases by type of job also reflects the fact that a high proportion of women are in "Health Care" and traditional "Service and Supply" jobs. We are however, equally interested in women holding non-traditional jobs which account for a small proportion of cases (170 for spontaneous abortion, 21 for preterm delivery, and 28 for hypertension). The evidence suggests one should over sample in the non-traditional category in order to capture as many of these individuals as possible in the case-control study

Lastly for feasibility and logistic purposes we stratified the three cases by US States in order to select higher density areas with many AF bases or referral hospitals. Note that California, Florida, Mississippi, Nebraska, Nevada, New Mexico, Texas, Virginia, and Louisiana account for most of higher density states.

The reexamination of distribution of cases to be selected from 1990 to 1994 indicate there are 1,367 cases for spontaneous abortion, 984 cases for preterm delivery, and 640 cases for hypertension. It is expected that the addition of two more years will increase the pool of available number of cases in order to ascertain 625 cases of each of the three adverse reproductive outcomes. The proposed cases (n=1,875) will be selected randomly from hospital discharge records. One control (n=1,875) will be selected for each case; a woman who delivers a normal newborn without pregnancy complications, matched to the case on the date of conception (+/- 2 months) and on AFB assignment. These controls will be selected randomly from potentially eligible women identified through the discharge files used to ascertain cases. The matching of each control to each case assures comparable information on occupational exposures and comparable access to medical care, which may vary between AFBs. Matching on these factors will reduce most potential bias without seriously limiting the risk factors we can study. For these a preview of the geographic dispersion of cases by state and base and command are important factors.

As seen earlier, the distribution of cases by job also showed "Health Care" and traditional "Service and Supply" jobs contained a larger proportion of the cases. In a separate review on the following page, the distribution of cases by Job and Major Command also showed that the number of cases were concentrated in "Operation Commands".

A more detailed review follows, where within each of the four major job categories (Administrative, Health Care, Service and Supply, Non-traditional, and Missing), is a breakdown of cases by US

State. It becomes clear that 9-10 states account for most of the cases reducing the logistical problems in retrieving records.

With the addition of the next two years of data, we do not anticipate a large shift in the available distribution of cases by major demographic factors. As it stands now, it will be a simple step is to identify the name of the bases within each state that contribute to the number of cases.

4. Industrial Hygiene Exposure Assessments

In February 1997, Diana Echeverria visited 4 Air Force Bases to determine how exposure data (independent of the medical record) is maintained at different bases. The study design takes advantage of routine Air Force procedures to document occupational exposures once a pregnancy has been confirmed. Within 5 days of clinical recognition, a physician and industrial hygienist assess each pregnant women's work place, talk to her, and to her supervisor. A physician's laboratory confirmation report, a Workplace File (AF Form 2755), a supervisor's letter, and the bioengineer's report (AF Form 513) are placed in the outpatient medical file. The data are sent to the Flight Surgeon's office which summarizes and reviews the material and issues the rationale for restrictions on a pregnancy Physical Profile (AF Form Profile 422). This form is also kept in the woman's outpatient medical file. The bioengineering AF Form 513 is more useful than the pregnancy Physical Profile as it contains well documented information listing; the location, jobtitle(s), descriptions of tasks, level of physical effort, exposures to noise, thermal stress, ionizing radiation, electromagnetic fields, metals, and solvents by chemical name and concentration (when available). The form is keyed to the Industrial Case File maintained by all Bioengineering Departments on every AFB, which maintain measured work place exposures.

Therefore, AF Form 513 contains all the recorded information necessary to extract chemical and physical exposures for each pregnancy, and the Industrial Case Files will be prove useful to assess the quality of this data.

However, after the IH visits, it was determined that there will be cases where the bioengineering form 513 is removed from the case files or is incomplete. Therefore, the most feasible way to collect the data recorded on the 513 and other relevant data is to first interview the women to determine which location a women worked in just before and during the relevant pregnancy. An IH technician will then visit the designated base to pick up a copy of the local medical record (if available), a listing of flight hour s (if any), the 513 form, and appropriate base-line and follow-up IH surveys conducted in her work area the year before and during the year of the pregnancy. This data will be entered while at the base using well-defined data-entry screens on a lap-top PC while visiting the base. More complex information found on baseline surveys can also be copied and sent to the study center. The computerized forms are to be written in Visual FoxPro.

With respect to the IH data collected from the women by interview, Dr. Echeverria has developed the portion of the computer assisted telephone interview (CATI) questionnaire. Within the two year interval of interest, an occupational and deployment history will be collected accompanied by information on shifts, routine exposures and acute over-exposures from spills, unusual events, accidents, and injuries for each job. The questions are partially based on portions of the questionnaire developed by the Naval Health Research Center, San Diego, for the U.S. Navy Shipboard Health Survey, assuring comparability with other military service studies. Occupational exposures, hypothesized to influence risks for the outcomes under study, will be collected through time- and exposure-specific matrices. This includes exposure to physical agents such as heat, noise, vibration,

ionizing radiation, and electromagnetic fields. Chemical agents of particular interest include heavy metals, jet fuels and solvents, sterilizing agents, and anesthetic gases. The frequency and duration of manual handling will also be requested for each job to permit comparison with the NIOSH Lifting Equation Index for over-exposure. Each task will be rated for the NIOSH variables, including mass, frequency, and the trajectory of the lift in coordinates measured from the hip girdle.

5. Reproductive History and Risk Factor Assessments

For each subject, inpatient medical records relevant to the index pregnancy will be obtained. This will include a copy of pregnancy workplace interviews conducted by the Air Force public health staff; a copy of the IH risk profile; and a copy of the obstetric record, including the delivery record. For each subject the medical record of the index admission will be requested from the Military Treatment Facility where the event occurred. The request is generated at the time the subject agrees to participate in the study. These records will be abstracted to obtain information on demographic factors and possible risk factors and confounders, such as smoking history, alcohol use, and maternal diabetes.

A one hour computer assisted telephone interview (CATI) questionnaire is almost ready for field testing and is similar in content to the questionnaires used in the USPHS 1988 National Maternal and Infant Health Survey. Study-specific CATI questionnaires will include questions regarding demographic variables including age, race, ethnicity, and marital status. Of particular interest for the study will be potential risk factors associated with the index pregnancy. We will use the maternal questionnaires to obtain exposure information from the subjects that are comparable to what is included in the pregnancy risk profile. This will allow us to do direct comparisons of information sources, to estimate exposures for comparable occupations when there is no risk profile, and to examine the question of recall bias in women with adverse outcomes. Risk factor information, which will be obtained for the three months prior to pregnancy and for each trimester, will include maternal health status, level of physical activity, changes in shifts or duty schedules, and psychological stress, alcohol consumption, and smoking history.

The questionnaires includes a section on time-to-pregnancy for the index pregnancy. Time-to-pregnancy is considered an outcome of interest in reproductive epidemiology and has been shown to be associated with both occupational and other exposures, such as smoking. Also included are questions regarding the occurrence of infertile periods lasting six months or more or seeking clinical evaluation and treatment for infertility.

Drs. Pennybacker, Echeverria, and Sever will be ready to conduct a small pilot study on 25 subjects in the next four months to assure accuracy and thorough training of the staff and to have a preliminary review of all fields extracted from records.

Appendix B

List of Publications, Abstracts, and Personnel

Over the course of the first year of this study, there have been no publications, attendance of annual meetings, or abstracts.

Dr. Diana Echeverria did however meet with USAF Lt. General Charles Rodeman Public Health Staff at Andrews Air Force Base including Col. M. Parkinson, Lt. Col. M. Ediger, and Lt. Col. S. Zelnick, and Col. Leo Cropper.

List of Personnel

Battelle CPHRE:

Diana Echeverria
Lowell Sever
Alvah C Bittner, Jr.
Margaret Pennybacker
Thomas Doane
Nancy Woods (Consultant)
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University of Texas:

John Herbold
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USAF:

Kevin Greyson